

REVISION OF THE AUSTRALIAN ANT SPIDER GENUS *HABRONESTES*
L. KOCH 1872 (ARANEAE: ZODARIIDAE): III THE *HABRONESTES*
MACEDONENSIS - GROUP IN QUEENSLAND AND NEW SOUTH WALES.

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The Queensland and New South Wales species of the *macedonensis*-group of the genus *Habronestes* L. Koch, 1872 are revised. The genus now contains 50 species Australia-wide, with 15 newly described and five previously known species of the *H. macedonensis*-group from Queensland and New South Wales. The species here described are *H. arehiei*, sp. nov. (♂), *H. bog*, sp. nov. (♀, ♂), *H. braemar*, sp. nov. (♂), *H. clausoni*, sp. nov. (♀, ♂), *H. diekmani*, sp. nov. (♂), *H. diocesegrafton*, sp. nov. (♂), *H. drummond*, sp. nov. (♀, ♂), *H. gallowayi*, sp. nov. (♂), *H. gayndah*, sp. nov. (♂), *H. gimbaro* sp. nov. (♂), *H. hooperi*, sp. nov. (♂), *H. jankae*, sp. nov. (♀, ♂), *H. powelli*, sp. nov. (♀, ♂), *H. tillmani*, sp. nov. (♂), *H. ulrichi*, sp. nov. (♂). The female of *H. ungari* is described for the first time. A key is provided for all *H. macedonensis*-group species known to date. □ *Arachnida, Araneae, Australia, Habronestes, new species, systematics, taxonomy.*

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The quite colourful ant spiders, Zodariidae, are one of the dominant families of ground hunting spiders in Australia. With 249 species currently described and an estimated total of 350–400 species, Australia has the richest known zodariid fauna worldwide (Joequé, 1991, 1995a, b; Joequé & Baehr, 1992, 1995, 2001; Baehr & Joequé 2000, 2001; Baehr 2003a, b, c, 2004 a, b, 2005; Baehr & Churchill 2003; Joequé & Churchill 2005; Raven & Baehr 2000). The Australian zodariid fauna is most diverse in the tropical and subtropical regions but the family reaches as far south as Tasmania where only three genera are known, *Asteron* (Joequé & Baehr, 2001), *Habronestes* and *Neostorena*, the latter of which is unrevised.

This paper is the third in a series revising the large, endemic Australian genus *Habronestes* (Baehr, 2003c; in press) and deals only with the fauna of Queensland and New South Wales. Species of *Habronestes* are yellow-spotted, medium sized (4.5 – 8.0 mm) spiders that are diurnal and feed predominantly on ants, mimicking their behaviour and sometimes even their chemical traits (Allan, Elgar & Capon, 1996).

This work is dedicated to the people and institutions who supported this work and continuing research on spider taxonomy, namely the Biodiversity Program of the Queensland Museum, the Australian Biological Resources Study (ABRS)

and the Bank of Queensland and the Anglican Diocese of Grafton both of which contributed to the Queensland Museum Foundation 'Name a Spider' project.

MATERIAL AND METHODS

Descriptions were generated with the aid of Intkey (Dallwitz et al., 1998) and shortened where possible. Locality data were managed and maps created with Biolink version 1.5 (CSIRO Entomology, Canberra, Australia; <http://www.biolink.csiro.au/>). The distributional data presented in Fig. 10 relate only to newly examined specimens listed in this paper. For additional distributional records of the previously described species of *Habronestes* refer to Baehr (2003c; in press).

Drawings include the body, right palp and epigyne. All measurements are in millimetres. Scales of drawings are: body (1 mm), palp (0.5 mm), epigyne (0.1 mm). Epigynes were cleared in lactic acid. Descriptions of spination and colour patterns follow those in Baehr (2003c). Female allotype species descriptions mention only the differences from the male. Throughout the text, figures cited from Baehr (2003c) are listed as 'fig.' those presented in this paper as 'Fig.'

Character abbreviations. ALE, anterior lateral eyes; AME, anterior median eyes; CD, copulatory

ducts; CO, copulatory opening; cl/cw, carapace length/carapace width; DTA, distal tegular apophysis; DTiA, dorsal tibial apophysis; LTA, retrolateral tegular apophysis; MOQ, median ocular quadrangle; PLE, posterior lateral eyes; PME, posterior median eyes; RCF, retrolateral cymbial fold; S, spermatheca; sl/sw, sternum length/sternum width; VTA, ventral tegular apophysis.

Institutional abbreviations. AM, Australian Museum, Sydney; BMNH, British Museum of Natural History, QM, Queensland Museum, Brisbane.

SYSTEMATICS

Habronestes L. Koch, 1872

Habronestes L. Koch, 1872: 299; Jocqué, 1991: 56; Jocqué, 1995: 143; Baehr, 2003c.

TYPE SPECIES. *Habronestes striatipes* L. Koch, 1872 by subsequent designation of Petrunkevitch (1928). Following Jocqué, 1991, *H. striatipes* L. Koch, 1872 is taken as the type species.

DIAGNOSIS. Cymbium with large, retrolateral fold (RCF). Palp with sickle-shaped VTA; DTA with long stalk and curled end covered with spicules, which functions as a conductor; embolus thin, semicircular, embolus base flattened. Tarsi I-IV with 2 rows of short stout ventral spines.

Baehr (2003c) provided a detailed description of the genus and divided the species into three groups based on their widely differing eye patterns (figs 7-13): the *H. australiensis*-group (fig. 7), the *H. macedonensis*-group (Fig. 2A, fig. 8) and the *H. pictus*-group (figs 9, 10).

Habronestes macedonensis-group

DIAGNOSIS. Eyes in 2 rows, both rows procurved, AME largest. Femur III, IV with a row of 3-6 stout dorsal spines at distal end; patella III, IV with 1 irregular longitudinal row of stout spines prolaterally. Abdomen with 1-4 pairs of white spots on anterior part and 1 or 2 in front of spinnerets or with chevrons. For a complete description of the group see Baehr, 2003c.

KEY TO SPECIES OF THE HABRONESTES MACEDONENSIS- GROUP OF QUEENSLAND AND NEW SOUTH WALES

1. Males 2
Females 21

2. Palpal patella with dorsal apophysis (Fig. 6D, fig. 30) 3
Palpal patella without dorsal apophysis 7
3. Basal segment of chelicerae with horizontal boss (Fig. 2F)..... 4
Basal segment of chelicerae without horizontal boss (Fig. 2E). 5
4. LTA retrolaterally directed, with u-shaped tip (Fig. 7C) *H. gumbaro* sp. nov.
LTA distally directed, tip not u-shaped (Fig. 7A) *H. boq* sp. nov.
5. Carapace pale yellow with dark cephalic area (Figs 2I, J) 6
Carapace uniformly dark (figs 16, 29) .. *H. hebroniae* Baehr
6. Carapace narrow, with two dark lateral bands that surround fovea as a triangle, but do not reach posterior margin of carapace (Figs 2H, J) *H. dickmani* sp. nov.
Carapace broad, with two dark lateral bands that unite just behind fovea and reach posterior margin of carapace (Figs 2G, I)..... *H. powelli* sp. nov.
7. Cymbium densely covered with long bristles (Figs 3E, F) *H. jankoe* sp. nov.
Cymbium covered with short bristles (Figs 3A-D).... 8
8. LTA fan-shaped, covered with small spicules (fig. 40) *H. macedonensis* (Hogg)
LTA not fan-shaped 9
9. Tibia and Metatarsus I with a ventral band of short conical setae. 10
Tibia and Metatarsus I without a ventral band of short conical setae. 12
10. Tibia and proximal part of metatarsus I with a ventral band of short conical setae; cymbial fold as long as whole cymbium (Figs 7E, F) *H. clousoni* sp. nov.
Distal part of tibia and metatarsus I with a ventral band of short conical setae; cymbial fold half as long as cymbium (Figs 4A, B, E, F). 11
11. VTA 3 x as long as wide, slender; LTA tip with two long apophyses, distal one serrated (Fig. 4E, F) *H. tillmani* sp. nov.
VTA 2 x as long as wide, broad; LTA tip with long retrolaterally directed hook (Fig. 4A, B) *H. drummond* sp. nov.
12. Cymbial tip with extremely strong spines; LTA with comb-like structure at tip (Fig. 5E.) *H. archiel* sp. nov.
Cymbial tip with normal spines; LTA without comb-like structure at tip (Figs 3C, 5C) 13
13. VTA very short, about as long as wide; LTA half-moon-shaped with dorsal spine (figs 44, 45) .. *H. ungar* Baehr
VTA much longer, at least twice as long as wide; LTA not half moon-shaped (Figs 3C, 5C) 14
14. LTA with long retrolaterally directed basal spine or apophysis (Figs 4C, 6E, fig. 27). 15
LTA without long retrolaterally directed basal spine or apophysis (Figs 3A, C, 5A, C, fig. 42)..... 17
15. VTA, about 3 times as long as wide, slender, half-moon-shaped (Fig. 6E, fig. 27). 16
VTA much broader, straight (Figs 4C) *H. gayndah* sp. nov.
16. Bulb small, about half of cymbium length; LTA with basal spine (Fig. 6E) *H. hooperi* sp. nov.

- Bulb larger, about 2/3 of cymbium length; LTA with complex basal apophysis (fig. 27). *H. rawlinsonae* Baehr
17. DTiA short and rounded or spatulate (fig. 43, Fig. 3D) 18
 DTiA bifurcate (Fig. 3B, 5B, D) 19
18. DTiA short and rounded (fig. 43). *H. weelahensis* Baehr
 DTiA spatulate (Fig. 3D). *H. gallowayi* sp. nov.
19. DTiA bifurcate, v-shaped; LTA with distal tip twisted, hood-shaped (Fig. 3A, B) *H. braemar* sp. nov.
 DTiA bifurcate, u-shaped, ventral part an erect spine (Fig. 5B, D); LTA with distal tip hook-shaped 20
20. Abdomen with 1 pair of white spots dorsally and 2 spots in front of spinnerets (Fig. 2D); LTA with broad tip (Fig. 5C, D). *H. ulrichi* sp. nov.
 Abdomen with 2 pairs of white spots dorsally and 1 spot in front of spinnerets (Fig. 1B); LTA with narrow tip (Fig. 5A, B). *H. diocesegrafton* sp. nov.
21. Epigyne with w-shaped scapus (fig. 35) *H. macedonensis* (Hogg)
 Epigyne without w-shaped scapus (Fig. 9A, figs 31-34) 22
22. Epigyne with a single copulatory opening (Fig. 8A, C, E) 23
 Epigyne with paired copulatory openings (Fig. 9A, C, E, figs 31, 33) 25
23. Copulatory opening slit-like, located at base of epigastric fold (Fig. 8E, F) *H. drummond* sp. nov.
 Copulatory opening broadly oval (Fig. 8A, C) 24
24. Spermathecae pear-shaped (Fig. 8A, B) *H. ungar* Bachr
 Spermathecae globular (Fig. 8C, D) *H. jankae* sp. nov.
25. Spermathecae coiled (Fig. 9E, F) *H. clausoni* sp. nov.
 Spermathecae not coiled (Fig. 9B, D, figs 32, 34) 26
26. Copulatory openings slit-like (Fig. 9C) *H. powelli* sp. nov.
 Copulatory openings not slit-like (Fig. 9A, figs 31, 33) 27
27. Copulatory openings broadly triangular (Fig. 9A) *H. boq* sp. nov.
 Copulatory openings oval or pear-shaped (figs 31, 33) 28
28. Copulatory openings long and oval; copulatory ducts s-shaped (figs 31, 32) *H. rawlinsonae* Baehr
 Copulatory openings broadly pear-shaped; copulatory ducts sausage-like (figs 33, 34) *H. hebroniae* Baehr

Habronestes archiei sp. nov.
 (Figs 1D, 2E, 5E-F, 10D)

ETYMOLOGY. In honour of Archie Nahman, the first son of Dr Helen Nahrung and Dr Owen Seeman, the Arachnology Collection Manager of the Queensland Museum.

MATERIAL. HOLOTYPE. Queensland: ♂, Garfield, 23°18'S 145°58'E, 13 Jan 1999, T. Churchill, pitfall (QM S70004). OTHER MATERIAL. Queensland: 2♂♂, Garfield, 23°18'S 145°58'E, 13 Jan 1999, T. Churchill, pitfall (QM S70005, S70006).

DIAGNOSIS. This species resembles *H. gayndah* sp. nov. in dorsal abdominal pattern and the

general shape of the male palp, but can be distinguished by the extremely strong distal spines at the tip of the cymbium and the comb-like structure at the tip of the retrolateral tegular apophysis (LTA) (Fig. 5E).

DESCRIPTION. *Male* (holotype). 5.88 long. Carapace 3.08 long, 2.12 wide, cl/cw 1.45, 1.28 high; caput 1.38 wide; sternum 1.40 long, 1.12 wide, sl/sw 1.25; abdomen 2.80 long, 2.00 wide.

Colour in alcohol. Carapace orange brown with dark fovea and dark bifurcate patches in front; sternum and chelieerae medium brown; endites and labium medium brown, distally white. Abdomen sepia brown, dorsally with 4-5 pairs of white spots in a line and 2-3 spots in front of spinnerets. Legs medium brown; coxae I-IV white; trochantera I-IV brown; femur I dark brown, II-IV with proximal part white, distal part dark brown; tibiae I-IV with brown lateral stripes.

Eyes. Nearly equal sized, AME largest. Eye group width 0.67 of caput width. Diameters: AME 0.22; ALE 0.20; PME 0.19; PLE 0.22. Interspaces: AME-AME 0.02; AME-ALE 0.04; PME-PME 0.08; PME-PLE 0.12; ALE-PLE 0.04. MOQ: AME-PME 0.46; AME-AME 0.46; PME-PME 0.46. Clypeus 0.5 high.

Chelieerae basal segment (Fig. 2E), typical for genus with lateral condyle and rows of hairs bordering inner margin.

Legs. Femora III, IV with a row of 5-6 stout dorsal spines at distal end; patellae III, IV with 2 longitudinal rows of stout spines prolaterally.

Male palp. (Fig. 5E-F) Cymbium with weak dorsal apical scopula and few extremely strong spines apically; retrolateral fold flat, 1/2 of cymbium length. LTA a broad, distally directed stalk with basoretrolateral apophysis; tip with comb-like structure. VTA long, relatively straight, with rounded tip, originating basally. DTiA tripartite. Femur with 3 stout dorsal spines.

Female unknown.

DISTRIBUTION. Known only from the type locality in central Queensland (Fig. 10D).

Habronestes boq sp. nov.
 (Figs 1A, 7A-B, 9A-B, 10B)

ETYMOLOGY. In honour of the Bank of Queensland, which supported the 'Name a Spider' project.

MATERIAL. HOLOTYPE. Queensland: ♂, Expedition Ra. NP, 'Amphitheatre Camp', 560m, 25°12'S,

148°59'E, 17-19 Dec 1997, G. Monteith, D. Cook, G. Thompson, pitfall (QM S47524). OTHER MATERIAL. Queensland: 1 ♀, Doitswood, 19°28'S, 146°27'E, Feb 1999, T. Churchill, pitfall (QM S72779).

DIAGNOSIS. The males and female were not collected together, but are matched on the basis of the identical colour patterns of their abdomina and legs. This species resembles *H. gumbardo* sp. nov. in abdominal pattern and the general shape of the male palp but can be separated by the folded retrolateral tegular apophysis (LTA). Females can be distinguished easily by their paired, triangular copulatory openings (Fig. 9A).

DESCRIPTION. *Male* (holotype). 6.68 long. Carapace 3.48 long, 2.72 wide, cl/cw 1.28, 1.68 high; caput 1.60 wide; sternum 1.56 long, 1.56 wide, sl/sw 1.00; abdomen 3.20 long, 2.36 wide.

Colour in alcohol. Carapace, sternum and chelicerae orange brown; endites and labium yellow, distally white. Abdomen sepia brown, dorsally with 4 pairs of white spots, nearly in line, and an undulate patch in front of spinnerets; laterally with an elongate horizontal white stripe reaching front of abdomen; ventrally with 1 longitudinal white stripe from epigastric fold to tracheal spiracle. Legs yellow; coxae I-IV white; trochantera I-IV white; femora I-IV with proximal part white shading to dark brown distally; tibiae I-IV with brown lateral stripes.

Eyes. AME largest. Eye group width 0.61 of caput width. Diameters: AME 0.27; ALE 0.18; PME 0.10; PLE 0.18. Interspaces: AME-AME 0.02; AME-ALE 0.06; PME-PME 0.14; PME-PLE 0.18; ALE-PLE 0.06. MOQ: AME-PME 0.56; AME-AME 0.56; PME-PME 0.54. Clypeus 0.96 high.

Basal segment of chelicera with a horizontal boss as in Fig. 2F, lateral condyle and rows of hairs, bordering inner margin. Abdomen. Tracheal spiracle small, slit-like, with a tiny pit.

Legs. Femora III, IV with a row of 3-4 stout dorsal spines at distal end; patellae III, IV with 2 longitudinal rows of stout spines prolaterally. Tibia and proximal part of metatarsus I with a band of short conical setae ventrally.

Male palp. (Fig. 7A, B) Cymbium with few spines apically, retrolateral cymbial fold deep, 2/3 of cymbium length. LTA a broad, distally directed stalk, tip folded. VTA long, sickle-shaped, originating basally. Tibia short, DTiA tiny, bifurcate. Palpal patella with stout, conical, dorsal apophysis.

Female. 7.96 long. Carapace 3.76 long, 2.80 wide, cl/cw 1.34, 2.12 high; caput 1.76 wide; sternum 1.68 long, 1.68 wide, sl/sw 1.00; abdomen 4.20 long, 3.32 wide.

Colour in alcohol. Carapace, sternum and chelicerae orange brown; endites and labium yellow, distally white. Abdomen sepia brown, dorsally with 4 pairs of white spots nearly in line and an undulate spot in front of spinnerets; laterally with an elongate horizontal white stripe reaching front, ventrally with a longitudinal white stripe from epigastric fold to tracheal spiracle. Legs yellow; coxae I-IV white; trochantera I-IV white; femora I-IV with proximal part white shading to dark brown distally; tibiae I-IV with brown lateral stripes.

Eyes. AME largest. Eye group width 0.64 of caput width. Diameters: AME 0.28; ALE 0.20; PME 0.22; PLE 0.24. Interspaces: AME-AME 0.06; AME-ALE 0.06; PME-PME 0.16; PME-PLE 0.16; ALE-PLE 0.06. MOQ: AME-PME 0.56; AME-AME 0.62; PME-PME 0.60. Clypeus 0.98 high.

Abdomen. Tracheal spiracle small, slit-like, with a tiny pit.

Legs. Femora III, IV with a row of 3-4 stout dorsal spines at distal end; patellae III, IV with 2 longitudinal rows of stout spines prolaterally.

Epigyne. (Fig. 9A, B) with paired, triangular copulatory openings, short, parallel directed copulatory ducts and widely separated, oval spermathecae.

DISTRIBUTION. Eastern Queensland (Fig. 10B).

***Habronestes braemar* sp. nov.**
(Figs 3A-B, 10D)

ETYMOLOGY. A noun in apposition taken from the type locality.

MATERIAL. HOLOTYPE. Queensland: ♂, Braemar State forest, 27°13'S, 150°50'E, 4-8 Nov 1980, QM, G.B.S.R.M. (QM S55169). **OTHER MATERIAL.** Queensland: 1 ♂, Braemar Forest Station, Brigalow, 380m, 9190, 27°13'S, 150°50'E, 2-4 Mar 2000, G. Monteith (QM S71642); 1 ♂, Lake Broadwater, via Dalby, gravel ridge 27°21'S, 151°07'E, 25-27 Jan 1985, V. Davies, J. Gallon, pitfall (QM S72777).

DIAGNOSIS. This species resembles *H. gallowayi* sp. nov. in the general shape of the male palp but can be distinguished by the bifurcate shape of the dorsal tibial apophysis.

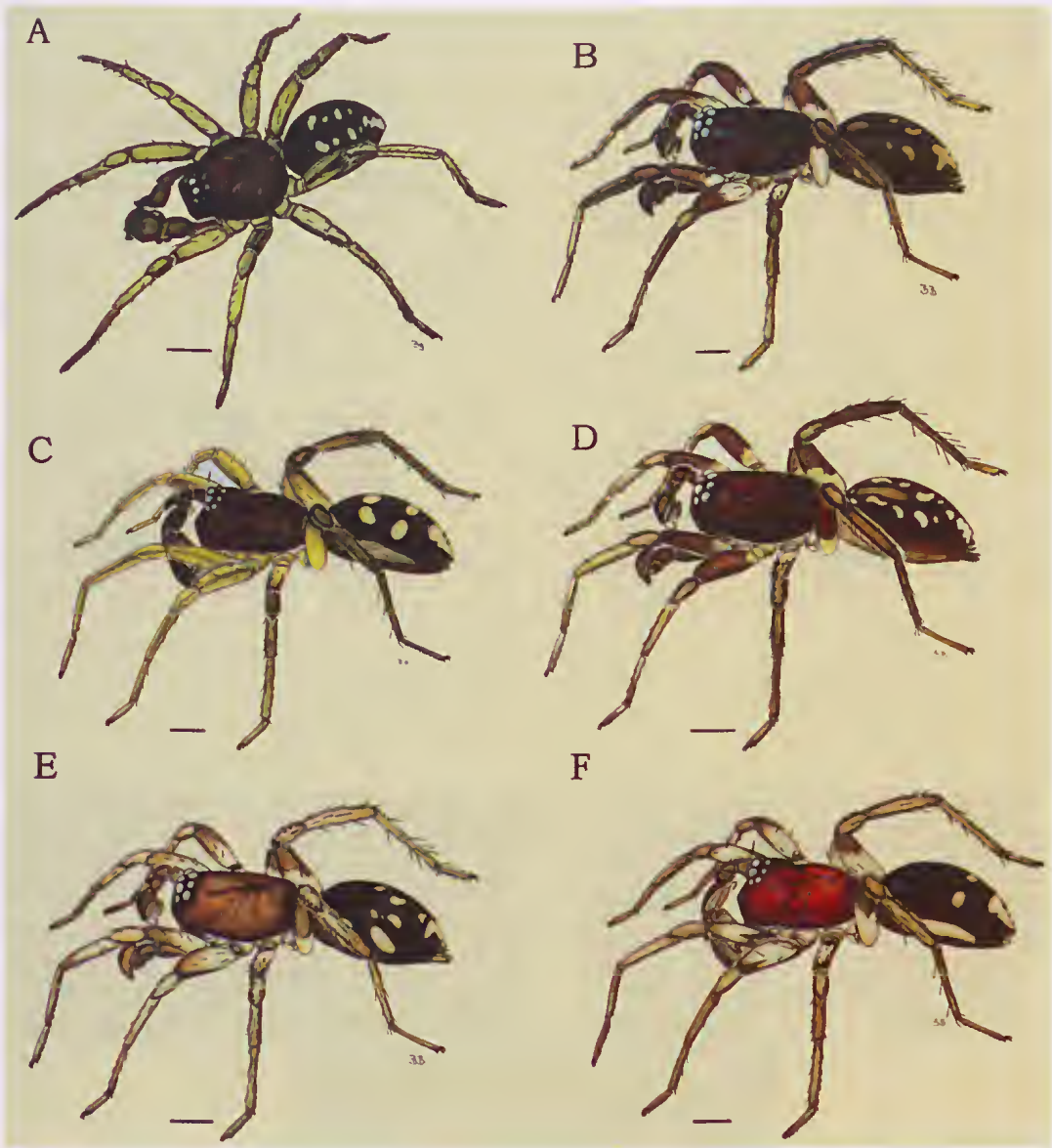


FIG. 1. *Habronestes* species, habitus. A, *H. boq* sp. nov.; B, *H. diocesegrifton* sp. nov.; C, *H. clausoni* sp. nov.; D, *H. archiei* sp. nov.; E, *H. hooperi* sp. nov.; F, *H. tillmani* sp. nov.

DESCRIPTION. *Male* (holotype). 6.00 long. Carapace 3.12 long, 2.24 wide, cl/cw 1.39, 1.40 high; caput 1.34 wide; sternum 1.44 long, 1.28 wide, sl/sw 1.13; abdomen 2.88 long, 2.12 wide.

Colour in alcohol. Carapace, sternum and chelicerae dark reddish brown; endites and labium medium brown, distally white. Abdomen sepia brown, dorsally with 4 pairs of white spots nearly in line, and an undulate patch in front of spinnerets; laterally with 2 white spots, anterior small, posterior

elongate. Legs medium brown; coxae I-IV white; trochantera I-IV brown; femur I dark brown, II-IV with proximal part white, distal part dark brown; tibiae I-IV with brown lateral stripes.

Sternum. Densely covered with long setae.

Eyes. AME largest. Eye group width 0.64 of caput width. Diameters: AME 0.21; ALE 0.18; PME 0.18; PLE 0.18. Interspaces: AME-AME 0.02; AME-ALE 0.04; PME-PME 0.08; PME-PLE 0.12; ALE-

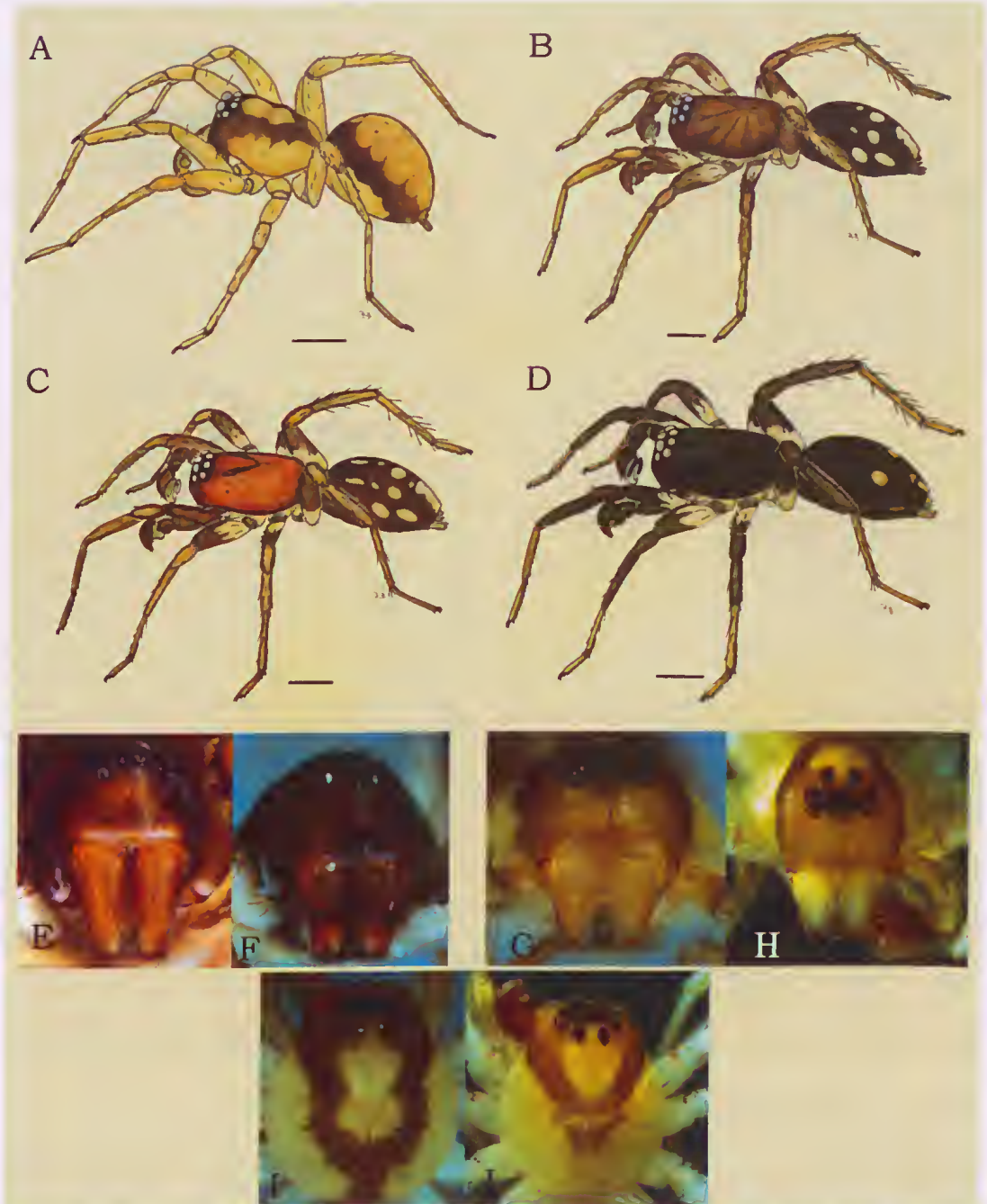


FIG. 2. *Habronestes* species, A-D, habitus; E-H, faces; I-J, carapace. A, *H. powelli* sp. nov.; B, *H. gallowayi* sp. nov.; C, *H. jankae* sp. nov.; D, *H. ulrichi* sp. nov.; E, *H. archieii* sp. nov.; F, *H. boq* sp. nov.; G-I, *H. powelli* sp. nov.; H-J, *H. dickmani* sp. nov.

PLE 0.04. MOQ: AME-PME 0.46; AME-AME 0.44; PME-PME 0.44. Clypeus 0.58 high.

Abdomen. Tracheal spiracle small, slit-like, with a tiny pit.

Legs. Femora III, IV with a row of 5-6 stout dorsal spines at distal end; patellae III, IV with 1 irregular longitudinal row of stout spines prolaterally; metatarsi I, II with 2 rows of spines ventrally.

Male palp. (Fig. 3A-B) Cymbium with weak dorsal scopula and few spines apically; tip shorter than wide; retrolateral cymbial fold flat, 1/2 of cymbium length. LTA a cylindrical, distally directed stalk; tip twisted, hood-shaped. VTA short, relatively straight, with sharp tip, originating prolaterally. Tibia elongate; DTiA bifurcate.

Female unknown.

DISTRIBUTION. Brigalow woodland in south-eastern Queensland (Fig. 10D).

Habronestes clausoni sp. nov.
(Figs 1C, 7E-F, 9E-F, 10D)

ETYMOLOGY. In honour of Owen Carl Clauson, a young, passionate, Australian spider collector.

MATERIAL. HOLOTYPE. Queensland: ♂, Astrebla Downs NP, 24°13' S, 140°34' E, Apr 1997, L. Gibson, pitfall (QM S68900). ALLOTYPE. Queensland: ♀, Astrebla Downs NP, 24°13' S, 140°34' E, Apr 1997, L. Gibson, pitfall (QM S68908). OTHER MATERIAL. Queensland: 9♂♂, 3♀♀, same as holotype (QM S68901- S68907, S68909, S68910).

DIAGNOSIS. This species can be distinguished from all other members of the *H. macedonensis*-group by the form of the cymbium which is sickle-shaped in lateral view and has a deep retrolateral cymbial fold that is as long as the cymbium itself (Fig. 7F). Females can be easily separated by their elongated and coiled copulatory ducts (Fig. 9F).

DESCRIPTION. *Male* (holotype). 6.60 long. Carapace 3.48 long, 2.40 wide, cl/cw 1.45, 1.76 high; caput 1.60 wide; sternum 1.40 long, 1.36 wide, sl/sw 1.03; abdomen 3.12 long, 2.32 wide.

Colour in alcohol. Carapace, sternum and chelicerae reddish brown; endites and labium medium brown, distally white. Abdomen sepia brown, dorsally with 2 pairs of white spots and a spot in front of spinnerets; laterally with an elongate horizontal white stripe. Legs pale brown; coxae I-IV white; trochantera I-IV white; femora I-IV with proximal part white shading to dark brown distally; tibiae I-IV with brown lateral stripes. Carapace raised at front; sternum densely covered with long setae.

Eyes. AME largest. Eye group width 0.63 of caput width. Diameters: AME 0.28; ALE 0.16; PME

0.20; PLE 0.22. Interspaces: AME-AME 0.06; AME-ALE 0.04; PME-PME 0.12; PME-PLE 0.16; ALE-PLE 0.04. MOQ: AME-PME 0.52; AME-AME 0.62; PME-PME 0.52. Clypeus 0.92 high.

Legs. Femora III, IV with a row of 3-4 stout dorsal spines at distal end; patellae III, IV with 1 irregular longitudinal row of stout spines prolaterally. Tibia and proximal part of metatarsus I with a band of short conical setae ventrally.

Male palp (Fig. 7E-F). Cymbium in lateral view sickle-shaped, with few spines apically; retrolateral fold deep, as long as whole cymbium. LTA a long, distally directed stalk; tip with short retrolateral spine and two prolate wing-shaped apophyses. VTA long, sickle-shaped, originating retrolaterally. Tibia short; DTiA spatulate.

Female. (allotype) 9.16 long. Carapace 4.80 long, 2.80 wide, cl/cw 1.71, 2.04 high; caput 2.08 wide; sternum 1.60 long, 1.48 wide, sl/sw 1.08; abdomen 4.36 long, 3.32 wide.

Colour in alcohol. As in male.

Eyes. AME largest. Eye group width 0.55 of caput width. Diameters: AME 0.32; ALE 0.20; PME 0.20; PLE 0.20. Interspaces: AME-AME 0.06; AME-ALE 0.06; PME-PME 0.26; PME-PLE 0.18; ALE-PLE 0.06. MOQ: AME-PME 0.62; AME-AME 0.70; PME-PME 0.66. Clypeus 1.04 high.

Legs. As in male but tibia and proximal part of metatarsus I without a band of short conical setae ventrally. Female palpal tibia and tarsus with a pro- and retrolateral row of long slightly bent setae.

Epigyne. (Fig. 9E-F) with paired, broad-oval copulatory openings; copulatory ducts elongated and coiled, ending in small slightly separated spermathecae.

DISTRIBUTION. Known only from the type locality in western Queensland (Fig. 10D).

Habronestes dickmani sp. nov.
(Figs 2H, J, 6A-B, 10E)

ETYMOLOGY. In honour of Dr Chris Dickman, who collected the holotype and most of the material examined.

MATERIAL. HOLOTYPE. Queensland: ♂, Ethabuca Stn., Simpson Desert, 23°46' S, 138°28' E, Nov 1994, C. Dickman, pitfall (QM S71682). OTHER MATERIAL. Queensland: 3♂♂, Charleville, Merigol, 25km NW, 10126, 25°16' S, 146°02' E, 3-6 May 2001, G. Monteith, dung trap (QM S 71667); 1♂, Charleville, 10907,

Merigol, site 7 mulga, 26°48'S, 145°49'E, Apr 2001, T. Beutel, pitfall (QM S63541); 10 ♂♂, Ethabuca Stn., Simpson Desert, 23°46'S, 138°49'E, Jun-Jul 1997, C. Dickman, pitfall (QM S71674); 3 ♂♂, same May 1991 (QM S71681); 1 ♂, same, Nov 1994 (QM S71683); 1 ♂, Mulga gradient, near Tylungra, 26°04'S, 143°27'E, Oct 1995, J. Landsberg, pitfall (QM S71680).

DIAGNOSIS. This species resembles *H. powelli* sp. nov. in body shape and the general structure of the male palp, but can be distinguished by a less developed dorsal apophysis on the palpal femur and the colour and form of the carapace. The cephalic area of *H. dicknani* is narrower and has a dark triangular marking that surrounds the fovea but does not reach the posterior margin of the carapace (Fig. 2H, J).

DESCRIPTION. *Male* (holotype). 4.08 long. Carapace 2.24 long, 1.56 wide, cl/cw 1.44, 0.92 high; caput 0.96 wide; sternum 1.00 long, 0.92 wide, sl/sw 1.09; abdomen 1.84 long, 1.36 wide.

Colour in alcohol. Carapace yellow with a dark cephalic area that surrounds fovea as a triangle but does not reach posterior margin of carapace; sternum and chelicerae yellow; endites and labium yellow, distally white. Abdomen pale, dorsally with 2 pairs of white spots and a spot in front of spinnerets; laterally and ventrally pale; with light brown ring around spinnerets and tracheal spiracle. Legs pale.

Eyes. AME largest. Eye group width 0.73 of caput width. Diameters: AME 0.21; ALE 0.14; PME 0.14; PLE 0.14. Interspaces: AME-AME 0.02; AME-ALE 0.04; PME-PME 0.1; PME-PLE 0.08; ALE-PLE 0.04. MOQ: AME-PME 0.4; AME-AME 0.44; PME-PME 0.38. Clypeus 0.48 high.

Abdomen. Tracheal spiracle small, slit-like, with a tiny pit.

Legs. Femora III, IV with 2 dorsal spines at distal end; patellae III, IV with 1 irregular longitudinal row of stout spines prolaterally, consisting of only 3 spines. Tibia I with a band of short conical setae ventrally.

Male palp. (Fig. 6A-B) Cymbium tip longer than wide, slender with few spines; retrolateral cymbial fold deep, 3/4 of cymbium length. LTA a cylindrical, distally directed stalk, tip scooped, with a long retrolateral spine. VTA long, sickle-shaped, with sharp tip, originating basally. Tibia short; DTiA absent. Palpal patella with stout, conical, dorsal apophysis.

VARIATION. The abdominal pattern is variable. It can consist of 2 pairs of pale spots (as in the

holotype) or 2 pairs of brown chevrons. Female unknown.

DISTRIBUTION. Dunes and mulga in central Queensland (Fig. 10E).

***Habronestes diocesegrafton* sp. nov.**
(Figs 1B, 5A–B, 10C)

ETYMOLOGY. In honour of the Anglican Diocese of Grafton, which supported the 'Name a Spider' project.

MATERIAL. HOLOTYPE. New South Wales: ♂, Carce 30°03' S, 148°31' E, Feb 2001, I. Oliver, pitfall (AM KS80830).

DIAGNOSIS. This species resembles *H. ulrichi* sp. nov. in the general shape of male palp, but can be distinguished by the narrow tip of retrolateral tegular apophysis (LTA) and the broader median tegular apophysis (VTA) (Fig. 5A).

DESCRIPTION. *Male* (holotype). 5.56 long. Carapace 2.76 long, 1.92 wide, cl/cw 1.44, 1.12 high; caput 1.18 wide; sternum 1.28 long, 1.16 wide, sl/sw 1.10; abdomen 2.80 long, 1.76 wide.

Colour in alcohol. Carapace, sternum and chelicerae sepia brown; endites and labium medium brown, distally white. Abdomen sepia brown, dorsally with 2-3 pairs of white spots and an elongate and undulate spot in front of spinnerets; laterally with a white patch. Legs medium brown; coxae I-IV white; trochantera I-IV brown; femora I-IV with proximal part white, distal part dark brown; tibiae I-IV with brown lateral stripes. Sternum densely covered with long setae.

Eyes. AME largest. Eye group width 0.66 of caput width. Diameters: AME 0.19; ALE 0.16; PME 0.16; PLE 0.16. Interspaces: AME-AME 0.08; AME-ALE 0.06; PME-PME 0.10; PME-PLE 0.10; ALE-PLE 0.06. MOQ: AME-PME 0.46; AME-AME 0.42; PME-PME 0.42. Clypeus 0.46 high.

Legs. Femora III, IV with a row of 5-6 stout dorsal spines at distal end; patellae III, IV with 2 longitudinal rows of stout spines prolaterally; metatarsi I, II with 2 rows of spines ventrally.

Male palp. (Fig. 5A–B) Cymbium with weak dorsal apical scopula and few spines apically; tip shorter than wide; retrolateral cymbial fold flat, 1/2 of cymbium length. LTA a long, distally directed stalk; tip tiny, hook-shaped. VTA sickle-shaped, with broadly rounded tip that is at least 1/4 as long as width of embolus base, originating basally. DTiA bifurcate.

Female unknown.

DISTRIBUTION. Known only from the type locality in northern New South Wales (Fig. 10C).

Habronestes drummond sp. nov.
(Figs 4A–B, 8E–F, 10F)

ETYMOLOGY. A noun in apposition taken from the type locality.

MATERIAL. HOLOTYPE. Queensland: ♂, Drummond Ra. summit, 920m, open forest, 10005, 23°32'S, 147°18'E, 18 Dec 2000–27 Mar 2001, G. Monteith, D. Cook, pitfall (QM S71631). ALLOTYPE. Queensland: ♀, same as holotype, 9822, 25 Oct–17 Dec 2005 (QM S71629). OTHER MATERIAL. 2 ♂♂, same as holotype, 10004, 18 Dec 2000–27 Mar 2001 (QM S71630).

DIAGNOSIS. This species resembles *H. gayndah* sp. nov. in abdominal pattern and the general shape of the male palp, but can be distinguished by the absence of a long retrolateral spine at the base of the retrolateral tegular apophysis (LTA) (Fig. 4A). Females of *H. drummond* can be separated from all others treated here by having a slit-like copulatory opening along the epigastric fold (Fig. 8F).

DESCRIPTION. *Male* (holotype). 6.76 long. Carapace 3.36 long, 2.08 wide, cl/ew 1.62, 1.28 high; caput 1.28 wide; sternum 1.52 long, 1.28 wide, sl/sw 1.19; abdomen 3.40 long, 2.20 wide.

Colour in alcohol. Carapace, sternum and chelicerae sepia brown; endites and labium medium brown, distally white. Abdomen sepia brown, dorsally with 3 pairs of white spots and 1–2 spots in front of spinnerets; laterally with 2 elongate white spots. Legs medium brown; coxae I–IV white; trochantera I–IV brown; femur I dark brown, II–IV with proximal part white, distal part dark brown; tibiae I–IV with brown lateral stripes. Sternum densely covered with long setae.

Eyes. AME largest. Eye group width 0.66 of caput width. Diameters: AME 0.23; ALE 0.16; PME 0.18; PLE 0.16. Interspaces: AME–AME 0.02; AME–ALE 0.04; PME–PME 0.08; PME–PLE 0.10; ALE–PLE 0.04. MOQ: AME–PME 0.46; AME–AME 0.48; PME–PME 0.44. Clypeus 0.50 high.

Abdomen. Tracheal spiracle small, slit-like, with sclerotised cover. Area between epigastric fold and tracheal spiracle covered with short, stout bristles.

Legs. Femora III, IV with a row of 5–6 stout dorsal spines at distal end; patellae III, IV with

1 irregular longitudinal row of stout spines prolaterally. Distal part of tibia and metatarsus I with a band of short conical setae ventrally.

Male palp. (Fig. 4 A–B). Cymbium with weak scopula and few spines apically; retrolateral fold flat, 1/2 of cymbium length. LTA a short, broad, distally directed stalk; tip with long, retrolaterally directed hook, covered with tiny spikes. VTA short, sickle-shaped, with sharp tip, originating prolaterally. Tibia short; DTiA short, t-shaped.

Female. (allotype) 8.80 long. Carapace 4.40 long, 2.92 wide, cl/ew 1.51, 1.60 high; caput 1.70 wide; sternum 1.92 long, 1.68 wide, sl/sw 1.14; abdomen 4.40 long, 2.80 wide.

Colour in alcohol. Same as in male.

Eyes. AME largest. Eye group width 0.65 of caput width. Diameters: AME 0.28; ALE 0.24; PME 0.23; PLE 0.24. Interspaces: AME–AME 0.06; AME–ALE 0.04; PME–PME 0.10; PME–PLE 0.14; ALE–PLE 0.04. MOQ: AME–PME 0.64; AME–AME 0.62; PME–PME 0.56. Clypeus 0.68 high.

Legs. Same as in male but without a band of short conical setae on distal part of tibia and metatarsus I. Female palpal tibia and tarsus with a prolateral row of long, slightly bent setae.

Epigyne. (Fig. 8E–F) a concave circle, copulatory opening slit-like along epigastric fold, barely visible. Vulva with short, thin copulatory ducts and oval, contiguous spermathecae in a v-shaped position.

DISTRIBUTION. Known only from the type locality in central Queensland (Fig. 10F).

Habronestes gallowayi sp. nov.
(Figs 2B, 3C–D, 10B)

ETYMOLOGY. The specific name is a patronym in honour of Dr Ian Galloway, the CEO of the Queensland Museum, who supported the 'Name a Spider' project.

MATERIAL. HOLOTYPE. Queensland: 1 ♂, Nipping Gully, 240m, 25°42'S, 151°26'E, 18 Dec 1998–26 Jan 1999, G. Monteith, intercept trap (QM S49819). OTHER MATERIAL. Queensland: 1 ♂, Mount Gavial, 3km SSW, 320m, 23°37'S, 150°28'E, 14 Mar 1999, D. Cook, pitfall (QM S51160).

DIAGNOSIS. This species resembles *H. jankae* sp. nov. in abdominal pattern and the general shape of the male palp, but can be distinguished by the spatulate shape of the dorsal tibial apophysis.

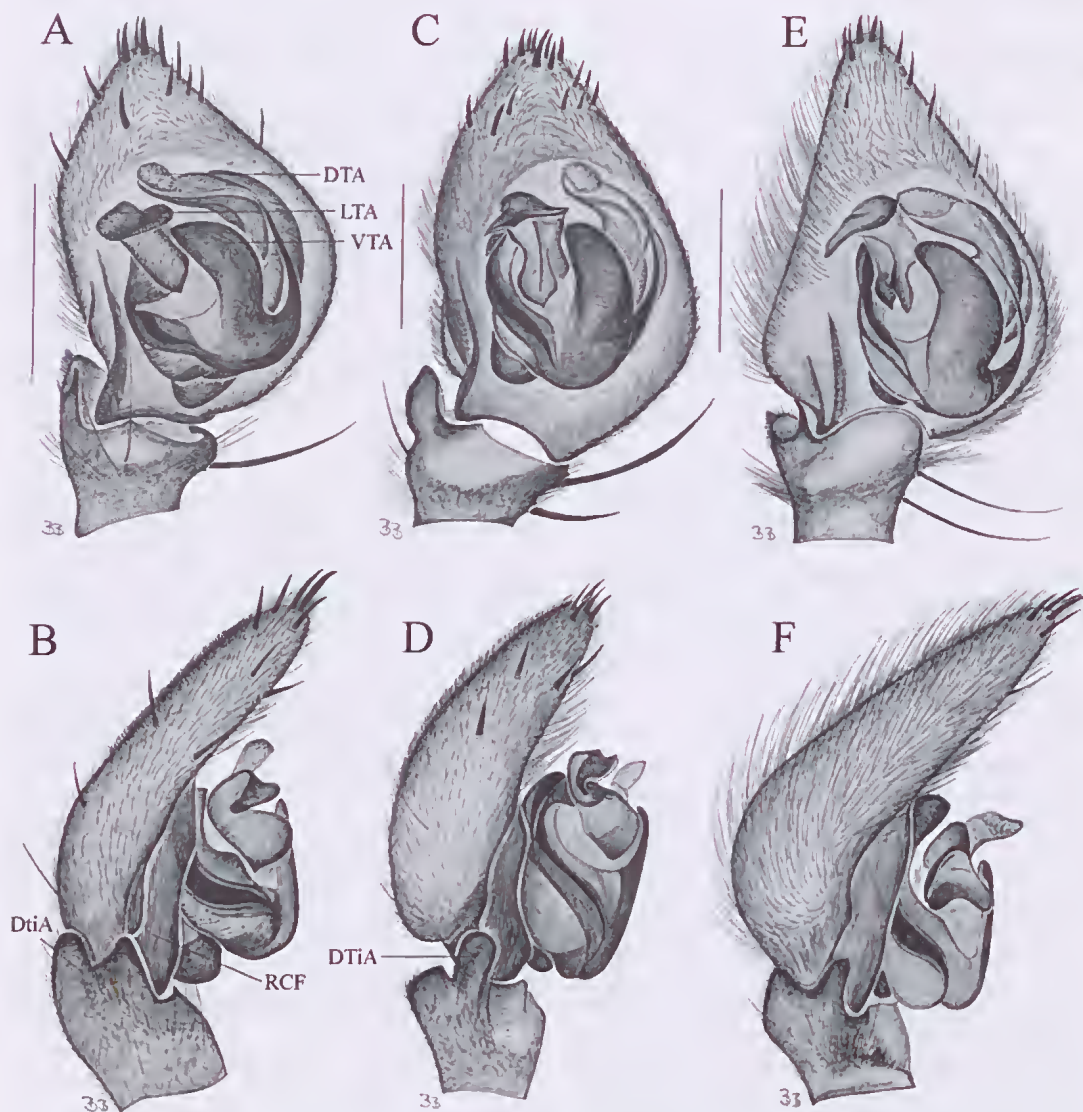


FIG. 3. *Habronestes* species, male palps, ventral view (top), lateral view (bottom). A-B, *H. braemar* sp. nov.; C-D, *H. gallowayi* sp. nov.; E-F, *H. jankae* sp. nov.

DESCRIPTION. *Male* (holotype). 7.24 long. Carapace 3.88 long, 2.60 wide, cl/cw 1.49; caput 1.44 wide, 1.24 high; sternum 1.72 long, 1.56 wide, sl/sw 1.10; abdomen 3.36 long, 2.16 wide.

Colour in alcohol. Carapace, sternum and chelicerae sepia brown; endites and labium medium brown, distally white. Abdomen sepia brown, dorsally with 3 pairs of white spots and 1-2 spots in front of spinnerets; laterally with 2 white spots, anterior small, posterior elongate. Legs pale brown; coxae I-IV white; trochantera

I-IV brown; femora I-IV with proximal part white, distal part dark brown; tibiae I-IV with brown lateral stripes (Fig. 2B).

Eyes. AME largest. Eye group width 0.65 of caput width. Diameters: AME 0.22; ALE 0.16; PME 0.20; PLE 0.18. Interspaces: AME-AME 0.06; AME-ALE 0.04; PME-PME 0.10; PME-PLE 0.12; ALE-PLE 0.04. MOQ: AME-PME 0.52; AME-AME 0.50; PME-PME 0.50. Clypeus 0.64 high, with a field of short, stout spines.

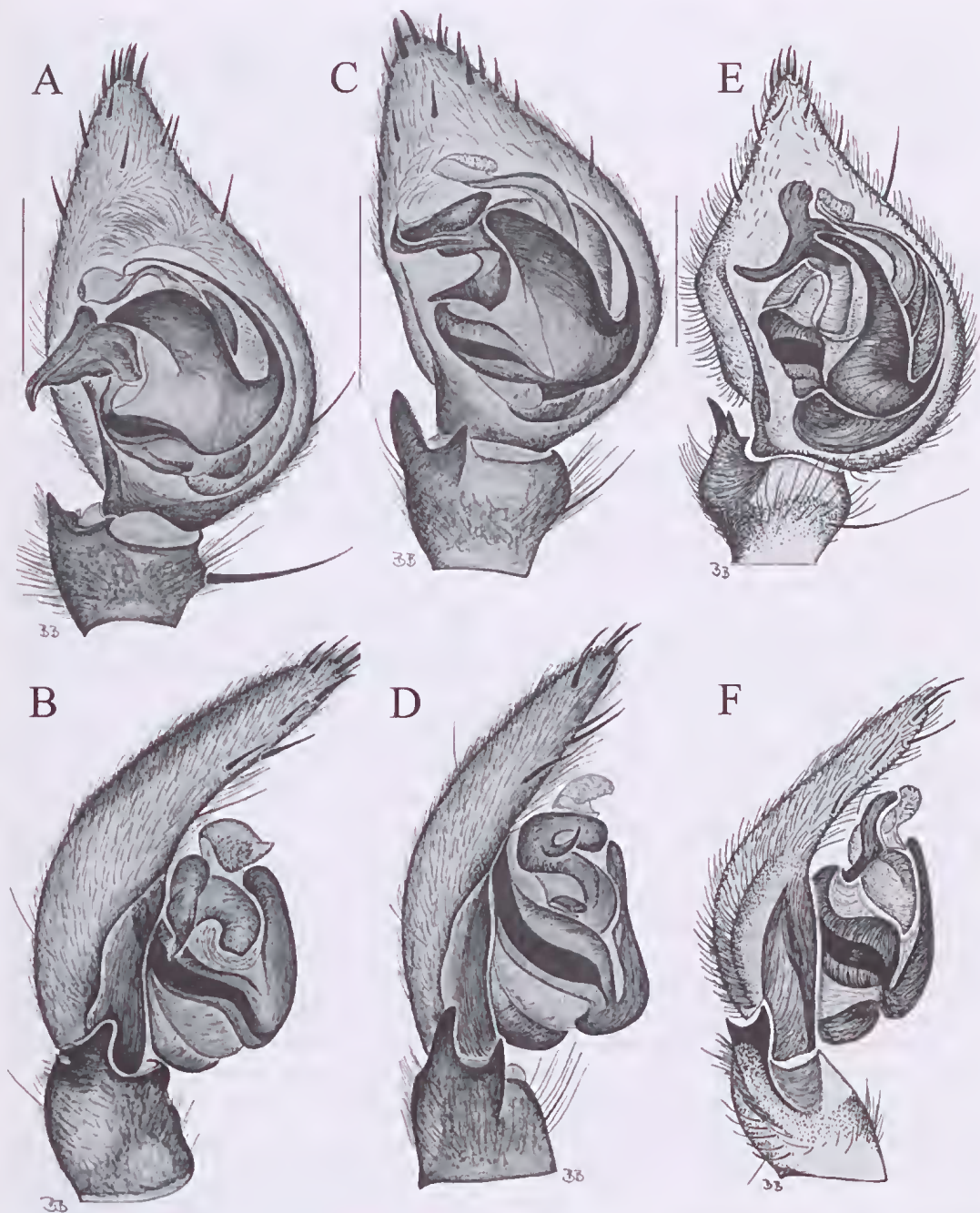


FIG. 4. *Habronestes* species, male palps, ventral view (top), lateral view (bottom). A-B, *H. drummond* sp. nov.; C-D, *H. gayndah* sp. nov.; E-F, *H. tillmani* sp. nov.

Abdomen. Tracheal spiracle small, slit-like, with a tiny pit.

Legs. Femora III, IV with a row of 5-6 stout dorsal spines at distal end; patellae III, IV with 2 longitudinal rows of stout spines prolaterally.

Male palp. (Fig. 3C, D) Cymbium with long dorsal scopula and few spines apically, retrolateral cymbial fold flat, 1/2 of cymbium length. LTA a broad, distally directed stalk, tip folded with retrolateral spine. VTA short, relatively straight,

with rounded tip. Embolus originates prolaterally. DTiA spatulate.

Female unknown.

DISTRIBUTION. South-eastern Queensland in open eucalyptus forest (Fig. 10B).

Habronestes gayndah sp. nov.
(Figs 4C-D, 10F)

ETYMOLOGY. A noun in apposition taken from the type locality.

MATERIAL. HOLOTYPE. Queensland: 1♂, Mount Gayndah summit, open forest, 340m, 25°36'S, 151°32'E, Jan 2001, B. Bachr, hand coll. (QM S71639). OTHER MATERIAL. Queensland: 1♂, same, 7589, 18 Dec 1998-27 Jan 1999, G. Monteith (QM S55163).

DIAGNOSIS. This species resembles *H. drummond* sp. nov. in abdominal pattern and the general shape of the male palp, but can be distinguished by having a long, retrolateral spine at the base of the retrolateral tegular apophysis (LTA) (Fig. 4C-D).

DESCRIPTION. *Male* (holotype). 5.44 long. Carapace 2.96 long, 2.08 wide, cl/cw 1.42, 1.36 high; caput 1.28 wide; sternum 1.36 long, 1.20 wide, sl/sw 1.13; abdomen 2.48 long, 1.68 wide.

Colour in alcohol. Carapace orange brown with dark fovea and bifurcate patches in front; sternum and chelicerae medium brown; endites and labium medium brown, distally white. Abdomen sepia brown, dorsally with 3 or 4 pairs of white spots and 2 or 3 spots in front of spinnerets; laterally with a white spot; ventrally pale brown. Legs medium brown; coxae I-IV white; trochantera I-IV brown; femora I-IV with proximal part white, distal part dark brown; tibiae I-IV with brown lateral stripes. Sternum densely covered with long setae.

Eyes. AME largest. Eye group width 0.59 of caput width. Diameters: AME 0.18; ALE 0.14; PME 0.16; PLE 0.16. Interspaces: AME-AME 0.04; AME-ALE 0.04; PME-PME 0.08; PME-PLE 0.12; ALE-PLE 0.04. MOQ: AME-PME 0.44; AME-AME 0.40; PME-PME 0.40. Clypeus 0.56 high.

Abdomen. Tracheal spiracle small, slit-like, with sclerotised cover.

Legs. Femora III, IV with a row of 5-6 stout dorsal spines at distal end; patellae III, IV with 1 irregular longitudinal row of stout spines prolaterally; metatarsi I, II with 2 rows of spines ventrally.

Male palp. (Fig. 4C-D) Cymbium with weak scopula and few spines apically; tip shorter than wide; retrolateral cymbial fold flat, 1/2 of cymbium length. LTA a broad, distally directed stalk, with long basoretrolateral spine; tip a long retrolateral spine. VTA short, relatively straight, with rounded tip, originating prolaterally. Tibia short; DTiA bifurcate. Female unknown.

DISTRIBUTION. Known only from the type locality in eastern Queensland (Fig. 10F).

Habronestes gumbardo sp. nov.
(Figs 7C-D, 10F)

ETYMOLOGY. A noun in apposition taken from the type locality.

MATERIAL. HOLOTYPE. Queensland: ♂, Gumbardo, site 1, 10638, 26°04'S, 144°45'E, Apr 2001, T. Beutel, pitfall (QM S63480). OTHER MATERIAL. Queensland: 3♂♂, same as holotype (QM S71624); 1♂, same (QM S63481).

DIAGNOSIS. This species resembles *H. boq* sp. nov. in abdominal pattern and the general shape of the male palp, but can be distinguished by the long, hook-shaped retrolateral tip of the retrolateral tegular apophysis (LTA) (Fig. 7C).

DESCRIPTION. *Male* (holotype). 5.76 long. Carapace 3.20 long, 2.40 wide, cl/cw 1.33, 1.36 high; caput 1.46 wide; sternum 1.40 long, 1.36 wide, sl/sw 1.03; abdomen 2.56 long, 1.92 wide.

Colour in alcohol. Carapace orange brown with dark margin, fovea and radiating stripes; sternum and chelicerae medium brown; endites and labium medium brown, distally white. Abdomen sepia brown, dorsally with 4 pairs of white spots, first and third larger, and one undulated spot in front of spinnerets; laterally with an elongate horizontal white stripe. Legs pale brown; coxae I-IV white; trochantera I-IV brown; femora and tibiae I-IV with brown lateral stripes.

Sternum. Densely covered with long setae.

Eyes. AME largest. Eye group width 0.62 of caput width. Diameters: AME 0.26; ALE 0.2; PME 0.2; PLE 0.2. Interspaces: AME-AME 0.02; AME-ALE 0.04; PME-PME 0.1; PME-PLE 0.12; ALE-PLE 0.04. MOQ: AME-PME 0.52; AME-AME 0.54; PME-PME 0.5. Clypeus 0.78 high.

Abdomen. Tracheal spiracle small, slit-like, with a tiny pit.

Legs. Femora III, IV with only 1 dorsal spine at distal end; patellae III, IV with 1 irregular

longitudinal row of stout spines prolaterally. Tibia and proximal part of metatarsus I with a band of short conical setae ventrally.

Male palp. (Fig. 7C–D) Cymbium with few spines apically, tip shorter than wide; retrolateral cymbial fold deep, 3/4 of cymbium length. LTA a long, retrolaterally directed stalk; tip with a long distally directed, retrolateral spine. VTA long, sickle-shaped, with rounded tip, originating basally. Tibia short; DTiA an undulated rim. Palpal patella with stout, conical, dorsal apophysis. Female unknown.

DISTRIBUTION. Known only from the type locality in central Queensland (Fig. 10F).

Habronestes hebrona Baehr, 2003
(Fig. 10A, figs 16, 29, 30, 33, 34, 48, 139)

Habronestes hebrona Baehr, 2003c: 352 (description of ♂, ♀). Holotype ♂, New South Wales, Pulletop, 33°00'S, 146°05'E, 24–28 Feb 1999, D. Driscoll, pitfall (QM S 50998) (examined).

MATERIAL. New South Wales: 1♂, Lower Murray-Darling Region, Belmore Station, 33°30'S, 141°10'E, 2 Apr 1999, M. LeBreton, pitfall (AM KS66605); 2♂♂, same, Mullingar Station, 33°20'S, 142°28'E, 12 Mar 1999, M. LeBreton, pitfall (AM KS66588, 66596); 8♂♂, same, Mulurulu Station, 33°20'S, 143°30'E, 19 Feb 1999, M. LeBreton, pitfall (AM KS66573–74, 66577); 1♂, same, Popitah Station, 33°09'S, 141°41'E, 11 Oct 1999, M. LeBreton, pitfall (AM KS91481); 1♂, Pilliga region, 'road reserve', 30°10'S, 148°55'E, Feb 2001, I. Oliver, pitfall (AM KS80818); 2♂♂, Pulletop, 33°00'S, 146°05'E, 24–28 Feb 1999, D. Driscoll, pitfall (QM S51516); 1♂, Ronvue Stn, 17km SSE of Tottenham, 32°23'S, 147°26'E, 3 Mar 2000, D. Shelley, pitfall (AM KS73916); 1♀, Taleeban, 33°56'S, 146°25'E, 12–18 Oct 1999, D. Driscoll, pitfall (QM S53156); 1♂, Taleeban, grazed strip, no spinifex, 33°56'S, 146°25'E, 23–27 Feb 1999, D. Driscoll, pitfall (QM S50900). Queensland: 2♂♂, Baracula Forest Station, Cypress Forest, 26°26'S, 150°30'E, 10–15 Oct 2004, G. Monteith, S. Wright, MV lamp (QM S68077); 13♂♂, Charleville, Merigol, mulga, 26°48'S, 145°49'E, Apr 2001, T. Beutel, pitfall (QM S63521–S63532); 1♂, Dotswood, 19°28'S, 146°27'E Feb 1999, Woinarski, pitfall (QM S71599); 1♂, East Woodmillar, 350m, vine scrub, 25°41'S, 151°36'E, J. Monteith, G. Thompson, pitfall (QM S51170); 1♂, Lake Broadwater, via Dalby, 27°21'S, 151°07'E, 25 Feb–27 Apr 1986, M. Bernie, pitfall (QM S47645); 1♂, same, 26 Mar–17 May, 1985, (QM S47681); 1♂, same, 27 Jan 2002, N. Platnick, B. Baehr, R. Raven, hand coll. (QM S72770); 1♂, Moranbah, 22°03'S, 148°04'E, 20 Dec 1997–26 Apr 1998, Monteith, pitfall (QM S47534); 1♂, Moranbah, 5km S, 240m, Gravel Ridge, 22°02'S, 148°03'E, 28 Feb–28 Mar 1995, G. Monteith, pitfall (QM ex S47532); 1♂, Mt

Pollux SW base, Brigalow, 400m, 22°28'S, 147°52'E, 5–6 Mar 2006, G. Monteith, dung trap (QM S74281); 1♂, Mt Rose, via Taroom, 24°38'S, 150°57'E, 30 Mar 1997, D. Cook, hand coll (QM S47520); 2♂♂, Mundubbera, 23°35'S, 151°18'E, 28 Oct 1993, pitfall (QM S60646); 1♂, Wanoan, Rolane Station, 26°07'S, 149°57'E, 27–29 Oct 1979, A. Rozefeld (QM S3816).

DIAGNOSIS. This species resemble *H. boq* sp. nov. in colour pattern and the general shape of the male palp and female epigyne, but can be easily distinguished by tibia I with a band of conical thornlike spines ventrally and LTA with long needle-like retrolateral thorn.

DISTRIBUTION. New South Wales and eastern of Queensland (Fig. 10A, fig 139).

Habronestes hooperi sp. nov.
(Figs 1E, 6E–F, 10E)

ETYMOLOGY. The specific name is a patronym in honour of Dr John Hooper, the Head of Biodiversity and Geosciences Programs of the Queensland Museum, and Director Queensland Centre for Biodiversity, who supported the 'Name a Spider' project and encouraged me in my revisionary taxonomic work.

MATERIAL. HOLOTYPE. Queensland: ♂, Oak Wells, 600m, 10420, 25°46'S, 148°17'E, 15 Dec 2001–7 Feb 2002, G. Monteith, D. Cook, pitfall (QM S58666).

DIAGNOSIS. This species can be separated from all the others described here by the extremely small bulb of the male palp (Fig. 6E).

DESCRIPTION. *Male* (holotype). 5.76 long. Carapace 3.16 long, 2.12 wide, cl/cw 1.49, 1.12 high; caput 1.32 wide; sternum 1.40 long, 1.20 wide, sl/sw 1.17; abdomen 2.60 long, 1.80 wide.

Colour in alcohol. Carapace, sternum and chelicerae medium brown; endites and labium medium brown, distally white. Abdomen sepia brown, dorsally with 2–3 pairs of white spots and an elongate and undulate spot in front of spinnerets; laterally with 2 white spots, anterior small, posterior elongate; ventrally pale brown. Legs pale brown; coxae I–IV white; trochantera I–IV white; femora I–IV with proximal part white shading to dark brown distally.

Sternum. Densely covered with long setae.

Eyes. AME largest. Eye group width 0.61 of caput width. Diameters: AME 0.18; ALE 0.17; PME 0.16; PLE 0.17. Interspaces: AME–AME 0.06; AME–ALE 0.04; PME–PME 0.08; PME–PLE 0.10; ALE–PLE 0.04; MOQ: AME–PME 0.46;

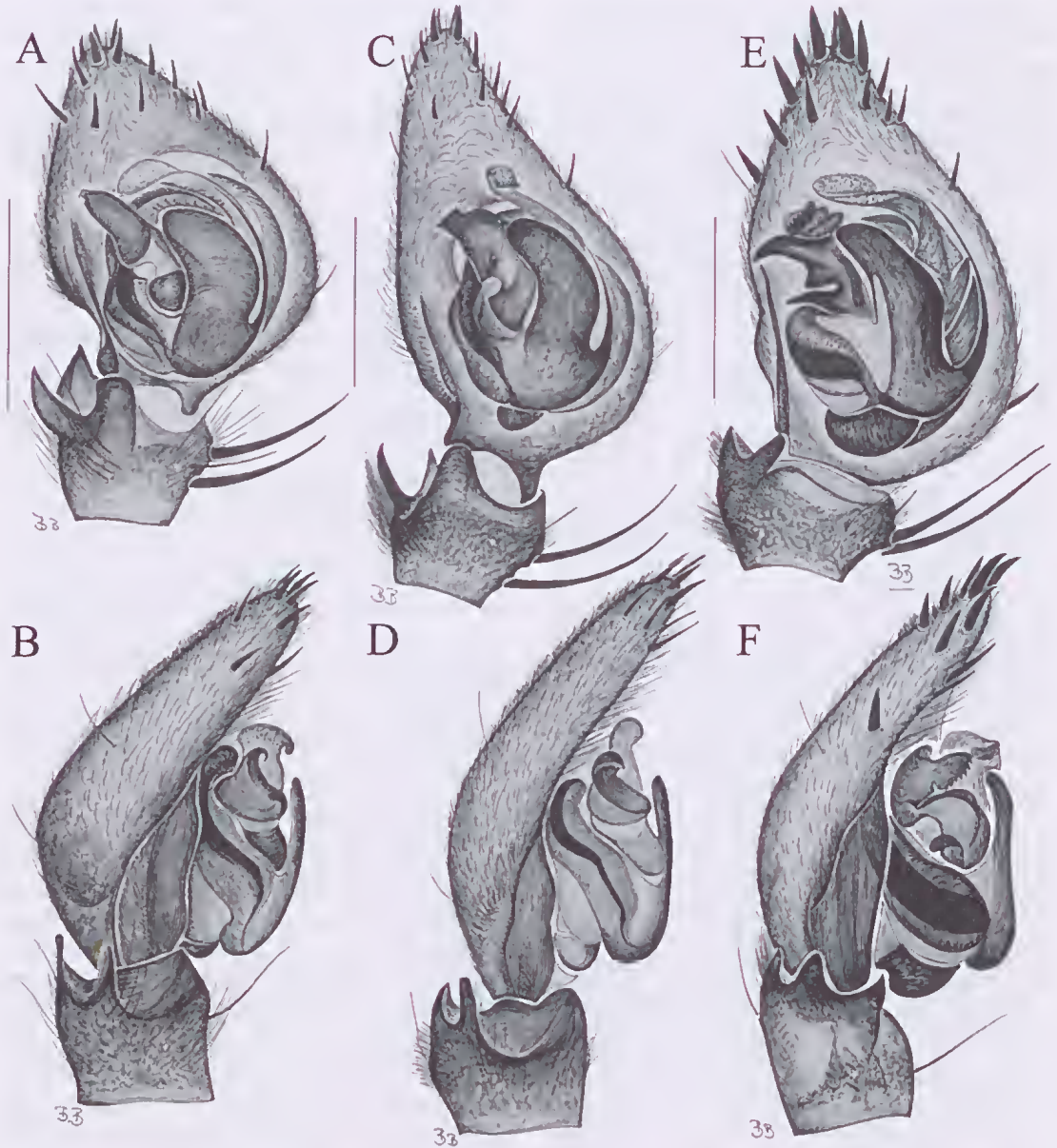


FIG. 5. *Habronestes* species, male palps, ventral view (top), lateral view (bottom). A-B, *H. diocesegrafton* sp. nov.; C-D, *H. ulrichi* sp. nov.; E-F, *H. archliei* sp. nov.

AME-AME 0.42; PME-PME 0.40. Clypeus 0.56 high.

Legs. Femora III, IV with a row of 5-6 stout dorsal spines at distal end; patellae III, IV with 2 longitudinal rows of stout spines prolaterally; metatarsi I, II with 2 rows of spines ventrally.

Male palp. (Fig. 6E-F) Cymbium with long dorsal scopula and few spines apically; retrolateral fold

flat, 1/3 of cymbium length. LTA a broad, distally directed stalk with long basoretrolateral spine; tip long and sharp. VTA long and slender, sickle-shaped, with rounded tip, originating basally. Tibia short; DTiA short, triangular. Female unknown.

DISTRIBUTION. Known only from the type locality in south-eastern Queensland (Fig. 10E).

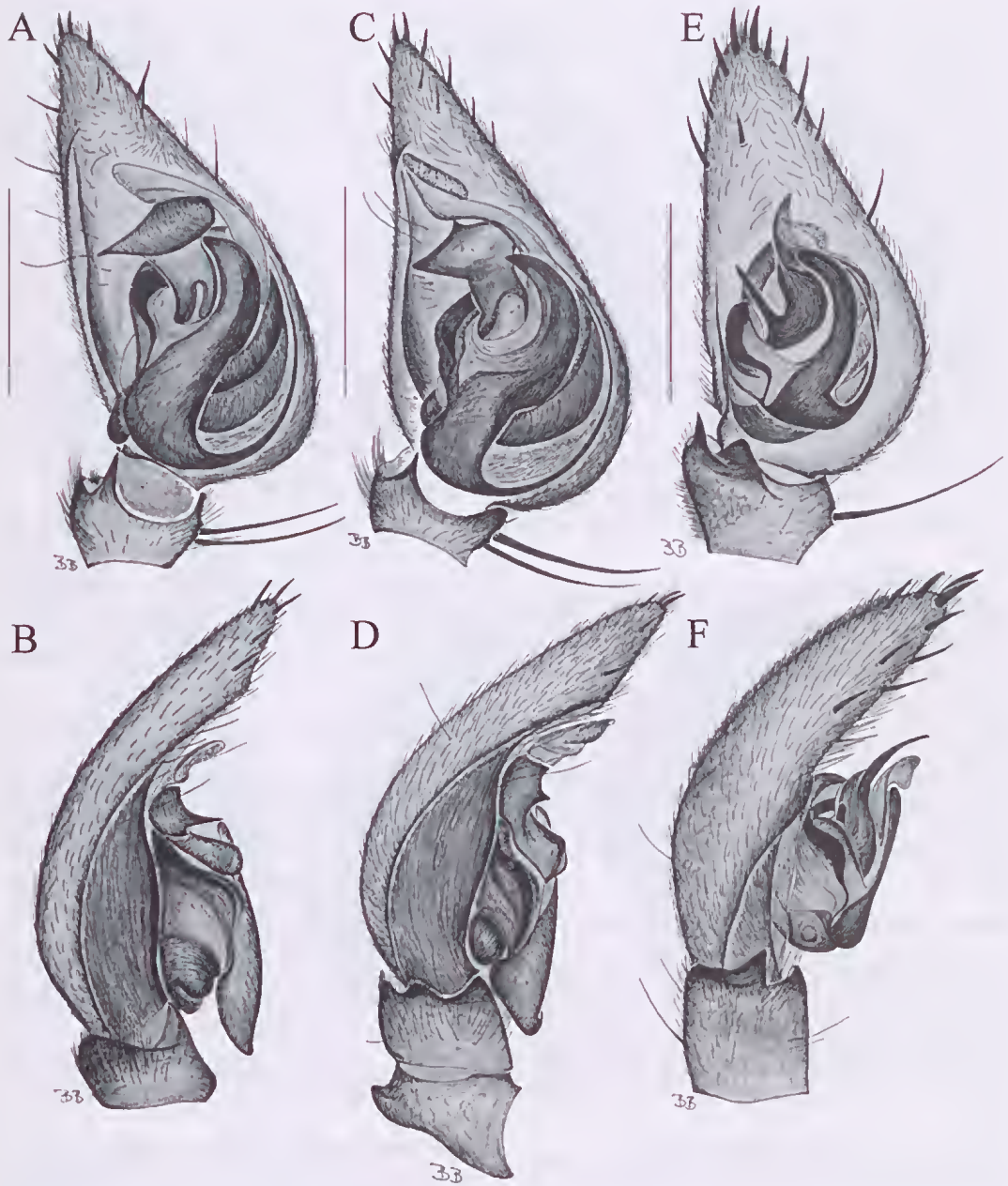


FIG. 6. *Habronestes* species, male palps, ventral view (top), lateral view (bottom). A-B, *H. dickmani* sp. nov.; C-D, *H. powelli* sp. nov.; E-F, *H. hooperi* sp. nov.

***Habronestes jankae* sp. nov.**
(Figs 2C, 3E-F, 8C-D, 10B)

ETYMOLOGY. In honour of Janka Henke, the director of the German Austrian Travel Agency, who supported the 'Name a Spider' project.

MATERIAL. HOLOTYPE. Queensland: ♂, Wandoan, Rolane str., 26°07'S, 149°57'E, 28 Oct 1979, A. Rozefelds (QM S3844 HT). OTHER MATERIAL. Queensland: 1♂, Allies Creek, 5km N, 360m, 10408, 26°03'S, 151°06'E, 11 Dec 2001-4 Mar 2002, G. Monteith, D. Cook, pitfall (QM S58654); 1♀, Brigalow Res. Stn., 170m, 10017, 24°48'S, 149°47'E, 16 Dec

2000-28 Mar 2001, D. Cook, G. Monteith, pitfall (QM S72778). New South Wales: 1♀, Corowa, 13.5km NW, roadside, 35°54'S, 146°16'E, Nov 2000, D. Freudenberger, pitfall (AM KS 84404).

DIAGNOSIS. Males and females have not been collected together, but are matched on the basis of their identical abdominal colour pattern and their sternae which are densely covered with long setae. Males of this species resemble *H. gallowayi* sp. nov. in abdominal pattern and the general shape of the male palp but can be distinguished by the cymbium which is densely covered with long setae (Fig. 3E-F). Females can be clearly separated from all other known females of the *Habronestes macedonensis*-group by their globular spermathecae (Fig. 8D).

DESCRIPTION. *Male* (holotype). 6.76 long. Carapace 3.36 long, 2.36 wide, cl/cw 1.42, 1.40 high; caput 1.22 wide; sternum 1.52 long, 1.28 wide, sl/sw 1.19; abdomen 3.40 long, 2.16 wide.

Colour in alcohol. Carapace orange brown, with dark fovea and dark bifurcate patches in front; sternum and chelicerae orange brown; endites and labium pale brown, distally white. Abdomen sepia brown, dorsally with 3 pairs of white spots and 1-2 spots in front of spinnerets; laterally with 2 white spots, anterior small, posterior elongate; ventrally pale brown. Legs pale brown; coxae I-IV white; trochantera I-IV pale, brown; femur I dark brown, II-IV with proximal part white, distal part dark brown; tibiae I-IV with brown lateral stripes (Fig. 2C).

Sternum. Densely covered with long setae.

Eyes. AME largest. Eye group width 0.66 of caput width. Diameters: AME 0.22; ALE 0.18; PME 0.18; PLE 0.18. Interspaces: AME-AME 0.02; AME-ALE 0.06; PME-PME 0.04; PME-PLE 0.14; ALE-PLE 0.06. MOQ: AME-PME 0.48; AME-AME 0.46; PME-PME 0.40. Clypeus 0.58 high.

Abdomen. Tracheal spiracle small, slit-like, with a tiny pit.

Legs. Femora III, IV with a row of 5-6 stout dorsal spines at distal end; patellae III, IV with 1 irregular longitudinal row of stout spines prolaterally. Metatarsus I with 2 irregular rows of small spines ventrally.

Male palp. (Fig. 3E-F). Cymbium densely covered with long setae, retrolateral cymbial fold flat, 1/3 of cymbium length. LTA a broad, distally

directed stalk, tip folded with retrolateral spine. VTA sickle-shaped, with rounded tip, originating prolaterally. Tibia short, DTiA triangular.

Female. 7.88 long. Carapace 4.08 long, 2.56 wide, cl/cw 1.59, 1.68 high; caput 1.50 wide; sternum 1.68 long, 1.52 wide, sl/sw 1.11; abdomen 3.80 long, 2.88 wide.

Colour in alcohol. Carapace orange brown with dark fovea and dark bifurcate patches in front; sternum and chelicerae orange brown; endites and labium pale brown, distally white. Abdomen sepia brown, dorsally with 3 pairs of white spots and 1-2 spots in front of spinnerets; laterally with 2 white spots, anterior small, posterior elongate; ventrally pale brown. Legs pale brown; coxae I-IV white; trochantera I-IV white; femora I-IV with proximal part white, distal part pale brown.

Sternum. Densely covered with long setae.

Eyes. AME largest. Eye group width 0.72 of caput width. Diameters: AME 0.28; ALE 0.20; PME 0.20; PLE 0.20. Interspaces: AME-AME 0.04; AME-ALE 0.04; PME-PME 0.18; PME-PLE 0.12; ALE-PLE 0.04. MOQ: AME-PME 0.58; AME-AME 0.6; PME-PME 0.58. Clypeus 0.64 high.

Abdomen. Tracheal spiracle small, slit-like, with a tiny pit.

Legs. Femora III, IV with a row of 5-6 stout dorsal spines at distal end; patellae III, IV with 2 longitudinal rows of stout spines prolaterally.

Epigyne. (Fig. 8C-D) With broadly oval copulatory openings, extremely short copulatory ducts and widely separated, globular spermathecae.

DISTRIBUTION. The female is from the southern border of New South Wales and the males from south-eastern of Queensland (Fig. 10B).

***Habronestes macedonensis* (Hogg, 1900)**
(figs 35, 36, 37, 40, 41, 46, 139)

Storena macedonensis Hogg, 1900: 2, 97, 98, pl. 14, fig. 4 (description of ♂); Rainbow, 1911: 150 (description of ♂). Holotype BMNH 1907.2.24.38 Victoria, Macedon, examined by Joequé, 1995b.

Habronestes macedonensis Hogg, Joequé, 1995: 145, fig. 3c-d (description male); Bachr, 2003c: 351, figs 35-37, 40, 41 (description of ♂, ♀).

REMARKS. The male of *Habronestes macedonensis* was first described by Hogg, 1900 as *Storena macedonensis*. Joequé (1995) reexamined the holotype and placed the species in *Habronestes* because of the palp structure.

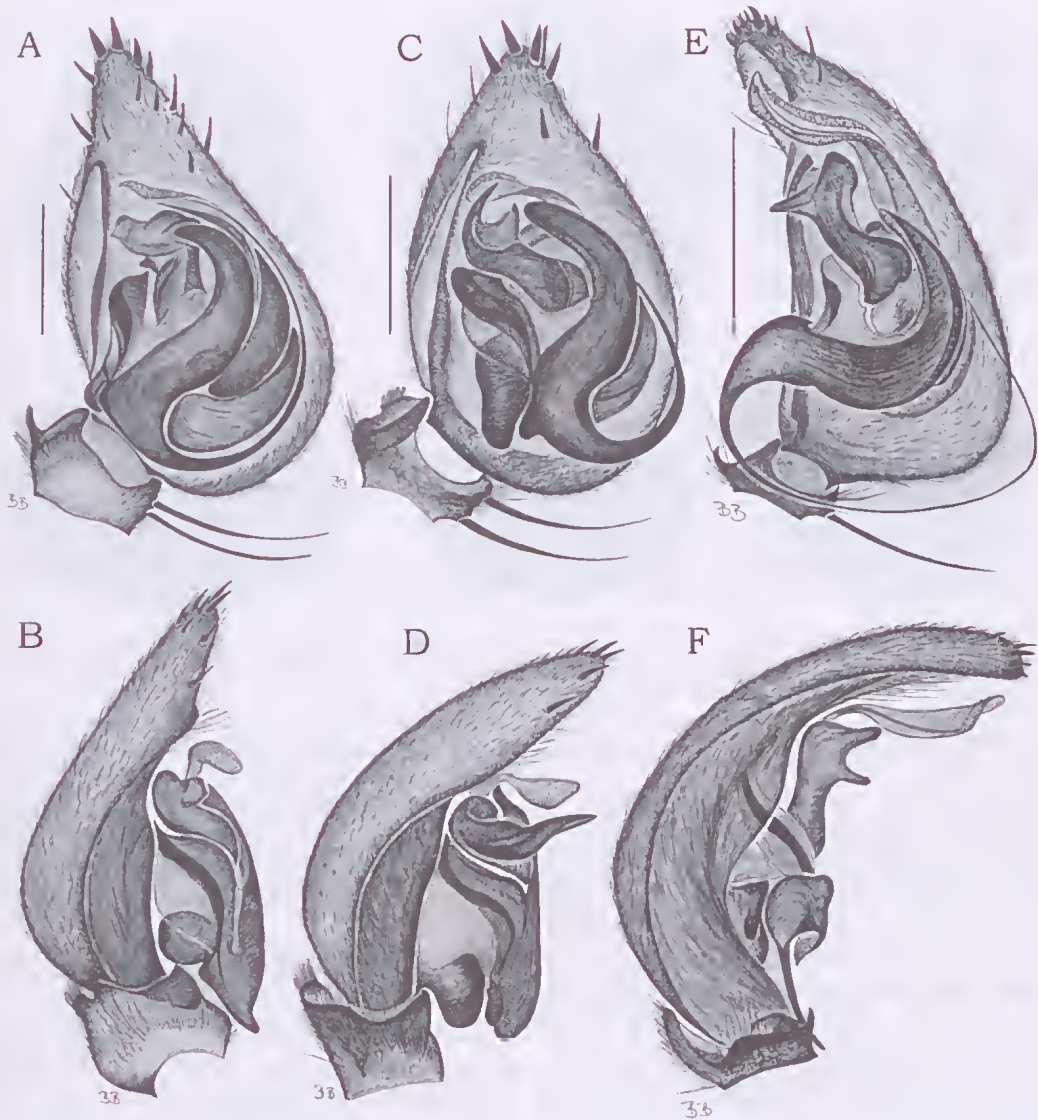


FIG. 7. *Habronestes* species, male palps, ventral view (top), lateral view (bottom). A-B, *H. boq* sp. nov.; C-D, *H. gumbaro* sp. nov.; E-F, *H. clausoni* sp. nov.

Baehr (2003c) provided a detailed redescription of the species.

DIAGNOSIS. Males of *H. macedonensis* can be easily separated from all other species by the fan-shaped retrolateral tegular apophysis (LTA) that is covered with small spicules (figs 40, 41) and females by their epigyne which has a w-shaped scapus (figs 35, 36).

DISTRIBUTION. Victoria, New South Wales and Tasmania (fig. 139).

***Habronestes powelli* sp. nov.**
(Figs 2A,G,I 6C-D, 9C-D, 10E)

ETYMOLOGY. In honour of Howard Powell, the director of qlab Brisbane, who installed the LEICA MZ16 and supported the spider taxonomy from the equipment side.

MATERIAL. HOLOTYPE. New South Wales: ♂, Lower Murray-Darling Region, Garston Station, 33°43'S, 141°55'E, 24–28 Jan 2000, M. LeBreton, pitfall (AM KS91546). ALLOTYPE. New South Wales: ♀, Lower Murray-Darling Region, Willotia

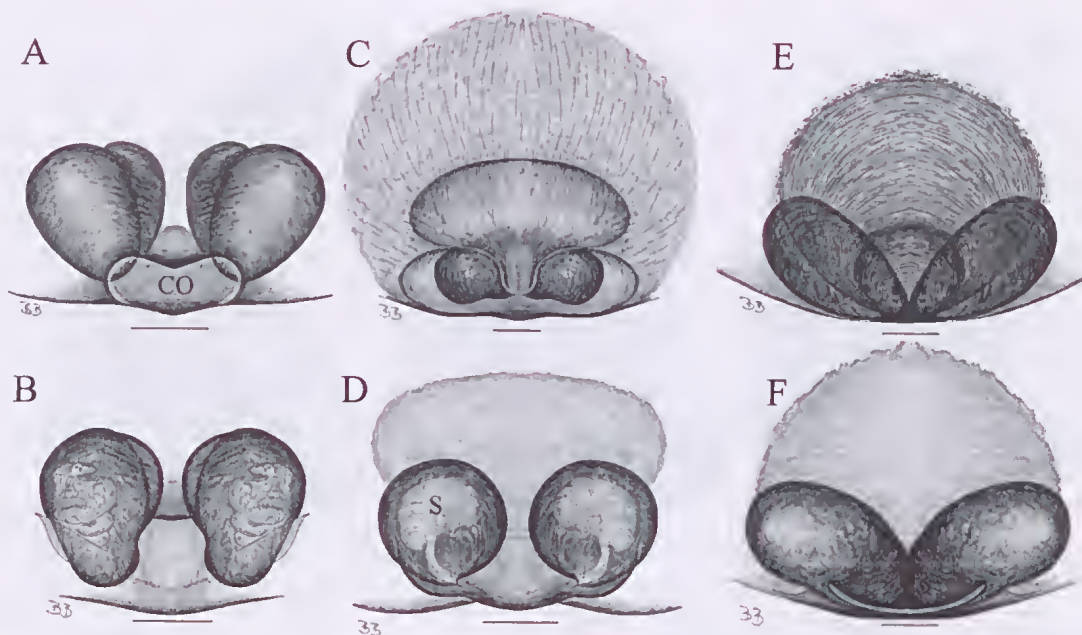


FIG. 8. *Habronestes* species, epigynes, ventral view (top), dorsal view (bottom). A-B, *H. ungari* Baehr; C-D, *H. jankae* sp. nov.; E-F, *H. drummond* sp. nov.

Station, 32°53'S, 142°14'E, 14–18 Feb 2000, M. LeBreton, pitfall (AM KS91572).

DIAGNOSIS. This species resembles *H. dickmani* sp. nov. in body shape and the general structure of the male palp but can be distinguished by the distinctive, stout, conical, dorsal apophysis on the palpal femur. Males and females can be separated from *H. dickmani* sp. nov. by having a broader cephalic area and two dark lateral bands on the carapace that unite just behind the fovea and reach posterior margin of the carapace (Fig. 2G, I). The abdominal patterns of *H. powelli* and some specimens of *H. dickmani* differ from those of all other members of the *H. macedonensis*-group by having dark chevrons on a pale background.

DESCRIPTION. *Male* (holotype). 4.40 long. Carapace 2.12 long, 1.68 wide, cl/cw 1.26, 1.00 high; caput 1.02 wide; sternum 1.00 long, 0.96 wide, sl/sw 1.04; abdomen 2.28 long, 1.72 wide.

Colour in alcohol. Carapace yellow with dark cephalic area, and two dark lateral bands that unite just behind fovea and reach posterior margin of carapace; sternum and chelicerae yellow; endites and labium yellow, distally white. Abdomen pale, dorsally with brown chevrons, and light brown ring around spinnerets and tracheal spiracle. Legs pale.

Eyes. AME largest. Eye group width 0.67 of caput width. Diameters: AME 0.21; ALE 0.14; PME 0.14; PLE 0.14. Interspaces: AME-AME 0.02; AME-ALE 0.04; PME-PME 0.12; PME-PL 0.10; ALE-PL 0.04. MOQ: AME-PME 0.40; AME-AME 0.44; PME-PME 0.40. Clypeus 0.50 high.

Abdomen. Tracheal spiracle small, slit-like, with a tiny pit.

Legs. Femora III, IV with a row of 3–4 stout dorsal spines at distal end; patellae III, IV with 1 irregular longitudinal row of stout spines prolaterally. Tibia I with a band of short conical setae ventrally.

Male palp (Fig. 6C–D). Cymbium with few spines apically, retrolateral fold deep, 3/4 of cymbium length. LTA a cylindrical, distally directed stalk, tip scooped, with tiny, distal thorn. VTA long, sickle-shaped, with sharp tip, originating basoretrolaterally. Tibia short; DTiA slightly bifurcate. Palpal patella with stout, conical, dorsal apophysis.

Female. (allotype) 4.84 long. Carapace 2.40 long, 1.72 wide, cl/cw 1.4, 0.96 high; sternum 1.16 long, 1.08 wide, sl/sw 1.07; abdomen 2.44 long, 1.84 wide.

Colour in alcohol. same as male.

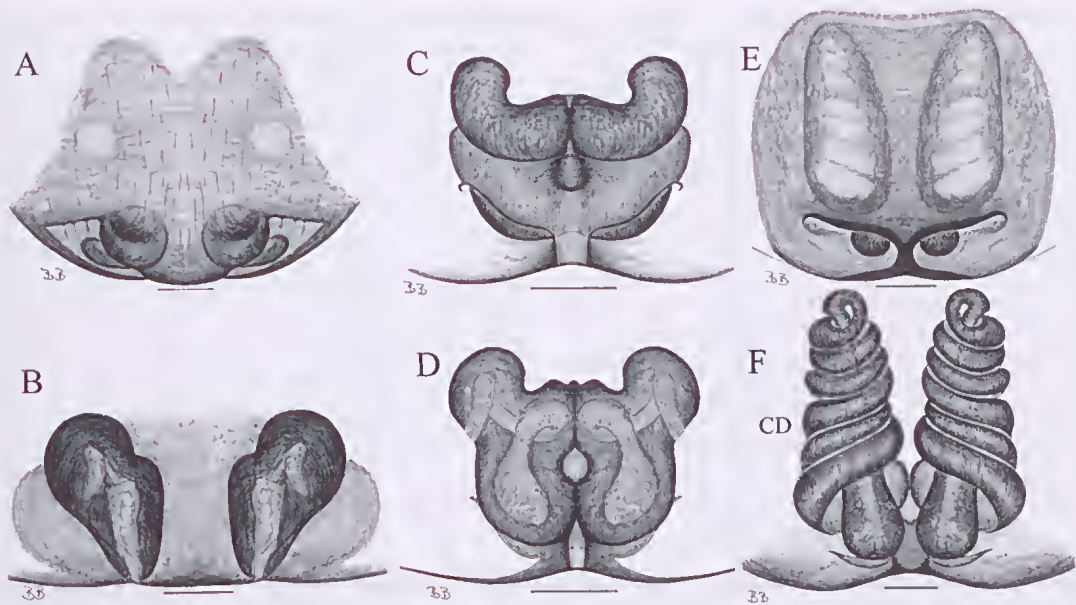


FIG. 9. *Habronestes* species, epigynes, ventral view (top), dorsal view (bottom). A-B, *H. boq* sp. nov.; C-D, *H. powelli* sp. nov.; E-F, *H. clausoni* sp. nov.

Eyes. AME largest. Caput 1.22 wide. Eye group width 0.62 of caput width. Diameters: AME 0.24; ALE 0.14; PME 0.14; PLE 0.16. Interspaces: AME-AME 0.02; AME-ALE 0.04; PME-PME 0.16; PME-PLE 0.12; ALE-PLE 0.04. MOQ: AME-PME 0.44; AME-AME 0.5; PME-PME 0.44. Clypeus 0.54 high.

Legs. Same as male but Tibia I without a band of short conical setae ventrally. Female palpal tibia and tarsus with a pro- and retrolateral row of long, slightly bent setae.

Epigyne. (Fig. 9C-D) With paired, slit-like copulatory openings. Copulatory duets twisted, ending in globular, contiguous spermathecae.

DISTRIBUTION. Far western New South Wales (Fig. 10E).

***Habronestes rawlinsonae* Baehr, 2003**
(Fig. 10A, figs 15, 27, 28, 31, 32, 50, 139)

Habronestes rawlinsonae Baehr, 2003c: 353 (description of ♂, ♀). Holotype ♂, New South Wales, Gubbata, 33°34'S, 146°34'E, 24-28 Feb 1999, D. Driscoll, pitfall (QM S51007) (examined).

MATERIAL. New South Wales: 3♂♂, Taleeban, 33°55'S, 146°27'E, 23-27 Feb 1999, D. Driscoll, pitfall (QM S50845); 4♂♂, same (QM S51626); 2♂, same (QM S51596); 1♂, same, 33°57'S, 146°37'E (QM

S51531); Queensland, 2♂♂, Gumbardo, 26°04'S, 144°45'E, Apr 2001, T. Beutel (QM S63439, S63478).

DIAGNOSIS. This species resembles *H. boq* sp. nov. in colour pattern, general shape of male palp and female epigyne but can be easily distinguished by the horseshoe-shaped retrolateral tegular apophysis.

DISTRIBUTION. New South Wales, south western Queensland (Fig. 10A, fig. 139).

***Habronestes tillmani* sp. nov.**
(Figs 1F, 4E-F, 10C)

ETYMOLOGY. In honour of Tillman Baehr, my godson who is very interested in natural history.

MATERIAL. HOLOTYPE. New South Wales: ♂, Gordon, 9 Nov 1981, 33°45'S, 151°10'E, C. Horseman (AM KS8553). OTHER MATERIAL. Queensland: 1♂, Weipa, 12°40'S, 143°00'E, 20 Mar-20 Apr 1994, P. Zborowski, flight intercept trap (QM S72766).

DIAGNOSIS. This species resembles *H. ulrichi* sp. nov. in dorsal abdominal pattern in having just a single pair of white spots dorsally and a single spot in front of the spinnerets. It can be distinguished by the male palp which has the tip of retrolateral tegular apophysis (LTA) with two long apophyses (Fig. 4E,F).

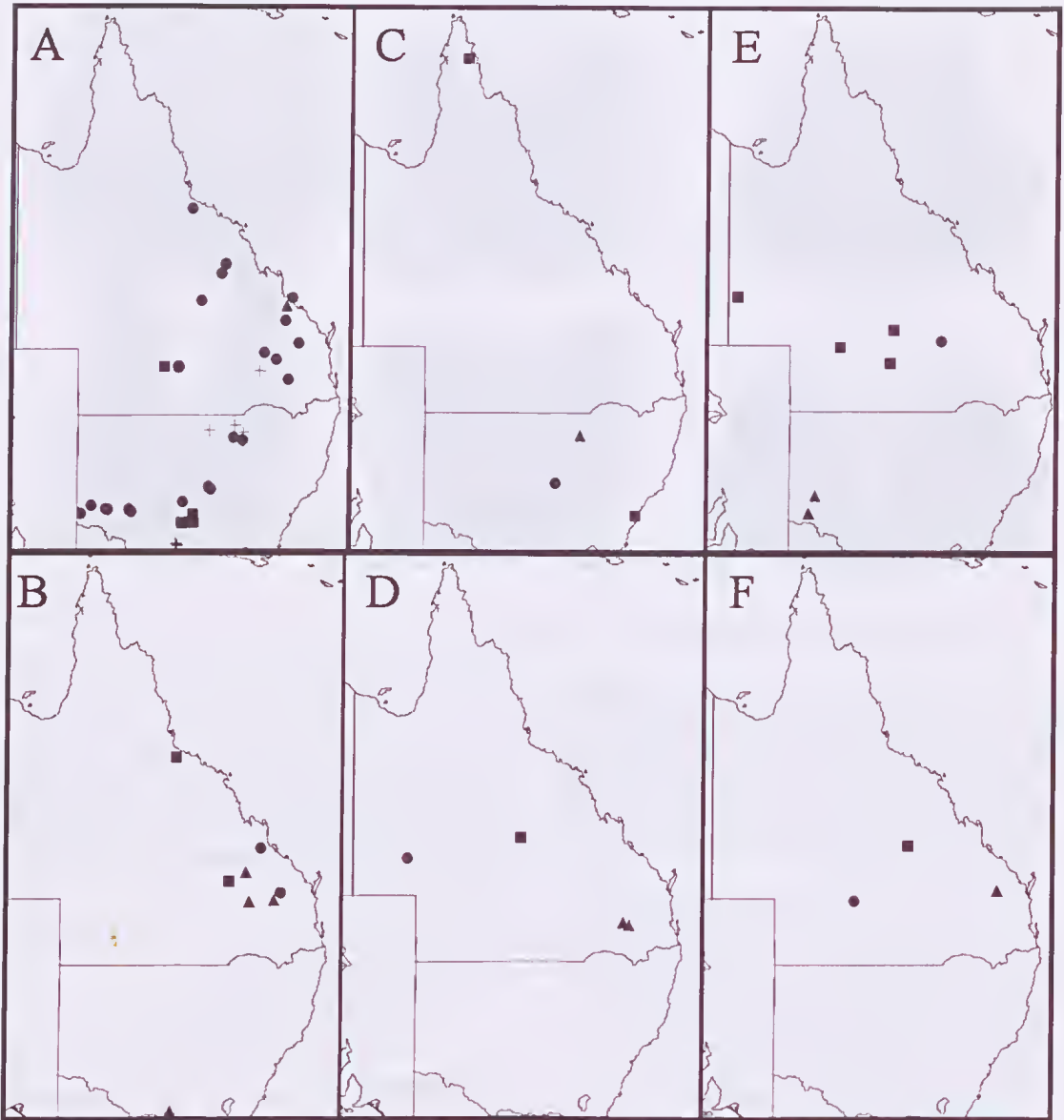


FIG. 10. Distribution records for *Habronestes* species. Only new records for previously described species are presented.

A, ● *H. hebronae* Baehr; ■ *H. rawlinsouae* Baehr; ▲ *H. weelahensis* Baehr; + *H. ungari* Baehr.

B, ● *H. gallowayi* sp. nov.; ■ *H. boq* sp. nov.; ▲ *H. jankae* sp. nov.;

C, ● *H. ulrichi* sp. nov.; ■ *H. tillmani* sp. nov.; ▲ *H. diocesegrafton* sp. nov.;

D, ● *H. clausoni* sp. nov.; ■ *H. archiei* sp. nov.; ▲ *H. braemar* sp. nov.;

E, ● *H. hooperi* sp. nov.; ■ *H. dickmani* sp. nov.; ▲ *H. powelli* sp. nov.;

F, ● *H. gumbardo* sp. nov.; ■ *H. drummond* sp. nov.; ▲ *H. gayndah* sp. nov.

DESCRIPTION. *Male* (holotype). 6.88 long. Carapace 3.36 long, 2.24 wide, cl/cw 1.50, 1.52 high; caput 1.34 wide; sternum 1.44 long, 1.32 wide, sl/sw 1.09; abdomen 3.52 long, 2.24 wide.

Colour in alcohol. Carapace and sternum orange brown; chelicerae medium brown; endites and labium pale brown, distally white. Abdomen sepia brown, dorsally with a pair of white spots

and a spot in front of spinnerets; laterally with a white patch; ventrally pale brown. Legs pale brown; coxae I-IV white; trochantera I-IV brown; femora I with proximal and distal parts brown, middle white, II-IV with proximal part white, distal part dark brown; tibiae I-IV with brown lateral stripes.

Sternum. Densely covered with long setae.

Eyes. AME largest. Eye group width 0.69 of caput width. Diameters: AME 0.28; ALE 0.18; PME 0.2; PLE 0.18. Interspaces: AME-AME 0.04; AME-ALE 0.04; PME-PME 0.12; PME-PLE 0.12; ALE-PLE 0.04. MOQ: AME-PME 0.54; AME-AME 0.60; PME-PME 0.52. Clypeus 0.60 high.

Abdomen. Tracheal spiracle small, slit-like, with a tiny pit.

Legs. Femora III, IV with a row of 3-4 stout dorsal spines at distal end; patellae III, IV with 2 longitudinal rows of stout spines prolaterally; distal part of tibia and metatarsus I with a band of short conical setae ventrally.

Male palp. (Fig. 4E-F) Cymbium with few spines apically; tip shorter than wide; retrolateral cymbial fold flat, 1/2 of cymbium length. LTA a distally directed stalk; tip with two long apophyses, distal one fan-shaped. VTA long, sickle-shaped, originating prolaterally. Tibia globose; DTiA bifurcate.

Female unknown.

DISTRIBUTION. Coastal New South Wales and Queensland (Fig. 10C).

***Habronestes ulrichi* sp. nov.**
(Figs 2D, 5C-D, 10C)

ETYMOLOGY. For Ulrich Baehr, my son, in honour of his 21st birthday, and who is very interested in natural history.

MATERIAL. HOLOTYPE. New South Wales: ♂, Tottenham 17km SSE, 'Ronvue' Station, 32°14'S, 147°18'E, 27 Feb-3 Mar 2000, D. Shelley, pitfall (AM KS97274). **OTHER MATERIAL.** New South Wales: 1♂, same as holotype (AM KS73907).

DIAGNOSIS. This species resembles *H. diocesegrafton* sp. nov. in the general shape of the male palp, but can be distinguished by the broader tip of the retrolateral tegular apophysis (LTA) (Fig. 5C,D). In addition, *H. ulrichi* differs in the abdominal pattern which has a single pair

of white spots dorsally and a single spot in front of the spinnerets.

DESCRIPTION. *Male* (holotype). 5.92 long, Carapace 3.44 long, 2.40 wide, cl/cw 1.43, I.24 high; caput 1.54 wide; sternum 1.60 long, 1.36 wide, sl/sw 1.18; abdomen 2.48 long, 2.12 wide.

Colour in alcohol. Carapace, sternum and chelicerae sepia brown; endites and labium medium brown, distally white. Abdomen sepia brown, dorsally with a pair of white spots and a spot in front of spinnerets. Legs medium brown; coxae I-IV white; trochantera I-IV brown; femur I dark brown, II-IV with proximal part white, distal part dark brown; tibiae I-IV with brown lateral stripes. Sternum densely covered with long setae.

Eyes. AME largest. Eye group width 0.65 of caput width. Diameters: AME 0.24; ALE 0.2; PME 0.22; PLE 0.20. Interspaces: AME-AME 0.04; AME-ALE 0.04; PME-PME 0.08; PME-PLE 0.12; ALE-PLE 0.04. MOQ: AME-PME 0.54; AME-AME 0.52; PME-PME 0.52. Clypeus 0.66 high.

Abdomen. With weak dorsal scutum. Tracheal spiracle slit-like, with broad sclerotised cover.

Legs. Femora III, IV with a row of 5-6 stout dorsal spines at distal end; patellae III, IV with 2 longitudinal rows of stout spines prolaterally.

Male palp (Fig. 5C-D). Cymbium with weak dorsal apical scopula and few spines apically; retrolateral cymbial fold flat, 1/3 of cymbium length. LTA a broad, distally directed stalk, tip straight. VTA sickle-shaped, with rounded tip, originating prolaterally. DTiA bifurcate.

Female unknown.

DISTRIBUTION. Central New South Wales (Fig. 10C).

***Habronestes ungari* Baehr, 2003**
(Figs 8A-B, 10A, figs 38, 44, 45, 49, 139)

Habronestes ungari Baehr, 2003c: 354 (description of ♂). Holotype ♂, New South Wales, Ungarie SF, 33°39'S, 147°40'E, 25 Mar 1996 D. Smith, R. Harris (AM KS 83934) (examined).

MATERIAL. New South Wales: 1♀, Narran Plains Rd, 3.8km N of Narran Lake jetn. (DRRPT137/05), 29°41'S, 147°20'E, 15 Dec 1999, F. Christie, P. Flemons & M. Elliott, pitfall (AM KS73756); 1♂, Cameron Lane, 4.6km W of Burren-Pocataroo Rd jetn., 29°48'S, 148°58'E, 14 Dec 1998, L. Wilkie, pitfall (AM KS73751); 2♂♂, Coleambally Irrigation Area, 34°56'S, 145°46'E, 28 Apr 1999, L. Wilkie, pitfall (AM KS67599, AM KS67615); 2♂♂, same,

35°02'S, 145°49'E, 14 Dec 1998, L. Wilkie, pitfall (AM KS68945, AM KS68960); 1♂, Pilliga region, 'Plain View', 30°10'S, 148°57'E, Feb 2001, I. Oliver, pitfall (AM KS80819); 1♂, Pilliga region, 'Rossmore Holdings' 30°04'S, 148°57'E, Feb 2001, I. Oliver, pitfall (AM KS80820). Queensland: 1♂, Yuleba State Forest, site 4, 270m, 26°58'S, 149°44'E, 9-10 Mar 2002, G. Monteith, D. Cook, dung trap (QM S58628).

DIAGNOSIS. This species resembles *H. gayndah* sp. nov. in abdominal pattern and the general shape of the male palp but can be distinguished by the extremely short VTA. Baehr, 2003c described only the male of *H. ungari*. The newly discovered female is described below.

DESCRIPTION. *Female.* (AM KS73756) 8.04 long. Carapace 3.64 long, 2.52 wide, el/cw 1.75, 1.44 high; caput 1.76 wide; sternum 1.52 long, 1.36 wide, sl/sw 1.12; abdomen 4.40 long, 3.00 wide.

Colour in alcohol. Carapace pale brown with dark fovea and dark radiating stripes; sternum and chelicerae pale brown; endites and labium pale brown, distally white. Abdomen sepia brown, dorsally with 3 pairs of white spots and 1-2 spots in front of spinnerets (fig. 38); laterally with 2 elongate white spots, anterior larger. Legs pale brown, with darker brown lateral stripes; coxae I-IV white; trochantera I-IV white; femora I-IV with proximal part white, distal part dark brown.

Eyes. AME largest. Eye group width 0.69 of caput width. Diameters: AME 0.32; ALE 0.24; PME 0.24; PLE 0.24. Interspaces: AME-AME 0.06; AME-ALE 0.04; PME-PME 0.16; PME-PLE 0.16; ALE-PLE 0.04. MOQ: AME-PME 0.60; AME-AME 0.70; PME-PME 0.64. Clypeus 0.64 high; chitum undivided.

Abdomen. Tracheal spiracle small, slit-like, covered with small stout spines.

Legs. Femora III, IV with a row of 3-4 stout dorsal spines at distal end; patellae III, IV with 2 longitudinal rows of stout spines prolaterally.

Epigyne. (Fig. 8A, B) With broadly oval copulatory opening and arched anterior margin. Copulatory ducts extremely short, spermathecae widely separated, inverted pear-shaped.

DISTRIBUTION. New South Wales and southern Queensland (Fig. 10A, fig. 139).

Habronestes weelahensis Baehr, 2003 (Fig. 10A, figs 39, 42, 43, 47, 139)

Habronestes weelahensis Baehr, 2003c: 355 (description of ♂). Holotype ♂, New South Wales, Weelah SF, Callitris forest, 33°21'S, 147°15'E, 25 Mar 1996, D. Smith, R. Harris, pitfall (AM KS 560900) (examined).

MATERIAL. Queensland: 1♂, Wycheproof, 23°59'S, 151°01'E, July 1998, pitfall (QM S72765).

DIAGNOSIS. Males of this species resemble *H. clausoni* sp. nov. in the general shape of the palp but can be distinguished by the much shorter retrolateral cymbial fold. In addition *H. weelahensis* can be distinguished by metatarsus I having one row of about 15 small spines ventrally.

DISTRIBUTION. New South Wales and coastal Queensland (Fig. 10A, fig. 139).

DISCUSSION

Zodariids are ground dwelling spiders that are not known to disperse aerially. They are often endemic to small areas, sometimes only to small patches of rainforest (e.g. species of *Tropasteron* Baehr, 2003b). Their low vagility makes ant spiders important for biogeographic studies.

The yellow-spotted ground spiders of the genus *Habronestes* belong to one of the most diverse ant spider genera in Australia. Fifty species, including those in this paper, have been described to date, but about 80 species are still undescribed. Although the genus *Habronestes* is not fully revised, there are already some biogeographical patterns evident. Only one species of the *macedonensis*-group is known from Tasmania (*H. macedonensis* itself) with 11 species now recorded from New South Wales and 15 from Queensland. This indicates that the *macedonensis*-group probably is most diverse and mainly distributed in the tropical and subtropical parts of Australia. Further studies will provide more detailed information about the relationships between the species, species groups and their distribution patterns.

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